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ABSTRACT

This compendium compiles 15 reports in a review of the research literature supporting law-related education (LRE) in the schools. Historical research and current findings are presented. This compendium is organized into three sections. Section 1 focuses on the research that has provided the foundation for the vision of LRE practiced by the National Training and Dissemination Program/Youth for Justice, including both the impact study conducted in the early 1980s and an ethnographic study of institutionalization of LRE conducted later in the decade. Section 2 looks at other research on school-based law-related/civic education. The final section presents 3 articles on research in other areas of education -- social studies, for example -- that support the project vision of LRE. (BT)

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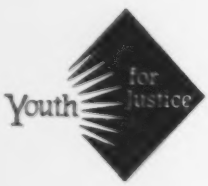
Compendium of Research Supporting Law-Related Education

Part II: Alternative Conceptions/Applications of Law-Related Education



Office of Juvenile Justice and Delinquency Prevention

Prepared by the Social Science Education Consortium
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INTRODUCTION

Background on the National Training and Dissemination Project/Youth for Justice

In 1978, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) awarded grants to five national LRE organizations to develop and disseminate law-related education curricula and programs for public and private schools. These organizations, collectively called the LRE National Training and Dissemination Program (NTDP), are:

- American Bar Association, Special Committee on Youth Education for Citizenship (ABA/YEFC)
- Center for Civic Education
- Constitutional Rights Foundation
- Street Law, Inc.
- Phi Alpha Delta Public Service Center

From 1981 to 1983, the programs and curricula of these organizations were evaluated to determine their effectiveness in reducing delinquent behavior. The evaluators, the Center for Action Research and the Social Science Education Consortium, found that, when properly implemented, LRE programs can not only increase knowledge about law and the legal system but also improve attitudes toward authority and reduce delinquent behavior.

For the remainder of the 1980s, OJJDP supported widespread dissemination of these delinquency prevention programs to schools at the elementary and secondary levels throughout the country. In the 1990s, dissemination of LRE programs in school settings has continued, but the collaborative project has focused more attention on a variety of special initiatives, including the LRE in Juvenile Justice Settings Initiative, a drug education initiative, an urban initiative, and an initiative specifically aimed at youth violence. To reflect the new focus of the program, the cooperative project was renamed Youth for Justice in 1994.

Purposes and Organization of This Compendium

Since 1984, the Social Science Education Consortium has served as the evaluation contractor for the NTDP/YFJ. One of SSEC's functions has been to collect and disseminate research information relevant to or about law-related education to the five cooperating organizations and the state LRE coordinators with whom they worked to disseminate LRE programs nationally. This compendium is a logical extension of that function, presenting a collection of research reviews that will be particularly useful to LRE practitioners as they design and implement LRE programs.

The compendium is being produced in two parts. The first part presented research that supports the vision of school-based law-related education that has been the hallmark of the NTDP/YFJ project. This second part of the compendium includes research related to the special initiatives undertaken by YFJ in recent years, as well as reviews related to possible future directions for LRE.

The first section in this part of the compendium presents results from four research and development sites at which YFJ grantees piloted model programs for at-risk youth. These four programs—in California, Illinois, and the District of Columbia—are based on LRE undertaken in school and juvenile justice settings and on other delinquency prevention research that shows youth are less likely to become involved in violent incidents if they develop particular prosocial attitudes, skills, and patterns of behavior. Evaluation has been an essential component of the four R&D programs, and the results of those evaluations are presented in the first section here.

The second and third sections of this volume present reviews of research in areas in which YFJ has taken LRE in the past several years—drug education and juvenile justice, for example—and areas that many LRE practitioners believe LRE should incorporate in the future—conflict resolution/mediation, character education, and service learning.

In preparation to produce this volume, SSEC staff conducted numerous searches of the education literature, including searches of ERIC, Dissertation Abstracts, and other relevant data bases. Nominations for inclusion were solicited from the five participating projects and all LRE state coordinators.

Dozens, if not hundreds, of articles might have been selected for inclusion in this volume. Due to both budgetary constraints and practical considerations of utility, we adopted a philosophy of "less is more"; that is, we decided to think of the collection as a set of starting points for locating relevant research. Thus, articles that reviewed and synthesized large bodies of research were sought rather than reports of specific pieces of research. Materials were selected on the basis of the following criteria:

- Their usefulness to LRE practitioners in planning and implementing programs.
- Their understandability. We looked for articles that were not overly technical but still were sufficiently detailed to allow for critical reading.
- Integrity and technical quality.

A. Law-Related Education and At-Risk Youth: Results at YFJ's Research and Development Sites

In 1995, the Youth for Justice program undertook a multi-year effort to develop and pilot law-related education programs for at-risk youth in Los Angeles, Chicago, and Washington, DC. Although the model programs vary in terms of settings, the types of youth served, and program components (e.g., curriculum materials, extent of teacher trainings), all are predicated on the following research-based assumptions:

- Youth with problem-solving and reasoning skills can draw on a wider variety of options than just fighting or running.
- Youth who feel a productive sense of purpose, independence, and power are more likely to seek nonviolent means to resolve conflict.
- Youth having such social capacities as empathy, effective communication, humor, and attachment to positive, nonviolent individuals have patterns of behavior that can protect them from violent encounters.

Evaluation has been an essential component of the R&D programs. Each program used a quasi-experimental evaluation design employing both qualitative and quantitative techniques. Quantitative measures included pre- and posttesting of knowledge, attitudes (e.g., prosocial behavior, parenting, cooperation, self-control, conflict resolution, school, and community), and behavior self-reports. Qualitative measures included classroom observations, videotaped role plays, focus group discussions, and interviews. Initial evaluation results were largely formative in nature, with results utilized for continuous improvement. The reports presented here are from the second phase of the evaluation effort, which focused on program impact.

The four sites are:

- Youth for Justice Program—Los Angeles, designed and implemented by the Center for Civic Education and the Constitutional Rights Foundation-Los Angeles.
- Violence Prevention Outcomes in Civic Education Program—Chicago, designed and implemented by the Constitutional Rights Foundation-Chicago and the American Bar Association Special Committee on Youth Education for Citizenship.
- Teen Parents and the Law Program—Washington, DC, designed by Street Law, Inc. and Phi Alpha Delta Service Center and implemented by Street Law.
- Teen Parents and the Law Program—Los Angeles, designed by Street Law, Inc. and Phi Alpha Delta Service Center and implemented by Phi Alpha Delta.

Assessment of Citizenship/Law-Related Education on Violent and Antisocial Behavior (Bell Gardens Intermediate School, Montebello USD)

Introduction

This report summarizes the quantitative and qualitative results of the year two, 1996-97, study conducted at Bell Gardens Intermediate School by the Center for Civic Education and Constitutional Rights Foundation and sponsored by Youth for Justice, National Coordinated Law-Related Education Program. The purpose of the two-year study is to assess whether citizenship/law-related education, when properly implemented, can prevent certain types of violent and anti-social behavior in upper elementary and middle school students.

The intervention includes a number of citizenship/law-related instructional materials designed for upper elementary and middle school instruction. The materials developed by the Center for Civic Education (CCE) and the Constitutional Rights Foundation (CRF) include: *Violence in the Schools: Developing Prevention Plans*; *Foundations of Democracy: Authority, Privacy, Responsibility, and Justice*; *We the People...* (from CCE); *Of Codes and Crowns*; *It's Yours: The Bill of Rights*; *City Youth*; and *Active Citizenship Today* (from CRF). These materials are the basis for the intervention curriculum designed by the Center for Civic Education and the Constitutional Rights Foundation in cooperation with the teachers at Bell Gardens Intermediate School.

The curriculum design integrates these citizenship/law-related instructional materials with the existing social studies curriculum for fifth and sixth grades at Bell Gardens Intermediate School, Montebello Unified School District, Montebello, California. The goals of the intervention curriculum are (1) to develop understanding about issues of authority, justice, community, violence, the role of law and public institutions in resolving conflict; (2) to increase cognitive and social skills; and (3) to develop more positive attitudes toward law, authority, prosocial behavior, and the community.

Focus of the Year Two Study

Year two of this assessment focused on implementing "lessons learned" during year one (please see Executive Summary, Year One). The recommendations that emerged from year one of the study included the following:

- Pretesting and posttesting should focus on the attributes that are enhanced by the citizenship/law-related materials.
- It is suggested to pretest and posttest the students on the knowledge component of the material.
- Due to the large number of fifth- and sixth-grade classes at Bell Gardens Intermediate School, both the experimental and the control groups can be selected from this school. These classes should be matched for instructional effectiveness, student competency in the English language, and students' overall achievement.
- The students need to work on doing a culminating activity such as a legislative hearing, a mock trial, or a community project.
- Due to the small number of "at risk" subjects, the evaluation of the "at risk" group should be based on qualitative and not quantitative methods.

Based on these recommendations, significant revamping of the year one study was undertaken. The details of these changes appear in the sections below.

The Study Group

The experimental group included one fifth- and one-sixth-grade self-contained class at Bell Gardens Intermediate School. The control group also included one fifth-grade and one sixth-grade self-contained class at Bell Gardens Intermediate School. The experimental and the control groups were matched on teacher effectiveness, student achievement, and the students' level of proficiency in the

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This program was evaluated by Mahtash Esfondari of the University of California at Los Angeles, Graduate School of Education.

English language. The "at risk" group included 12 students selected by the school administration to participate in the program.

Bell Gardens follows a year-round schedule of classes. The student population is approximately 97% Latino-Hispanic with lower to lower middle socioeconomic status. Approximately 27% of the students are classified as limited English proficient: 75% of the sixth-grade control subjects, 83% of the sixth-grade experimental subjects, 53% of the fifth-grade control subjects, and 77% of the fifth-grade experimental subjects indicated they spoke Spanish at home half of the time or more often.

One hundred and sixty-four subjects participated in the study, including 72 fifth-graders, 80 sixth-graders, and 12 "at risk" students. The experimental groups included 39 fifth-graders and 38 sixth-graders. The control groups included 33 fifth-graders and 42 sixth-graders.

The Evaluation

The experimental and the control subjects in the fifth and sixth grade were exposed to the intervention between August 1996 and June 1997. Evaluation of the intervention with these groups included both quantitative and qualitative techniques. The "at risk" group received the intervention during the fall semester, 1996, and no quantitative measures were used.

The quantitative methods for fifth- and sixth-graders included pretesting and posttesting the knowledge and the attitudes of subjects in both the experimental and the control groups. The knowledge test for the fifth grade consisted of a 25-item multiple choice test on the History and Principles of the United States Constitution. The knowledge test for the sixth grade consisted of vocabulary related to leadership and a series of comprehension questions related to the development of laws and community.

The attitude survey incorporated six clusters of four to eleven questions each. This was four fewer clusters than in the year one survey. The six clusters included authority, community, pro-social behavior, cooperation, rules, and police.

The data resulting from the knowledge test and the attitude survey were analyzed separately by cluster. Factorial analysis of covariance (ANCOVA) comparing group (experimental vs. control) and gender (boys vs. girls) was conducted on the pretest and posttest data. Pretest scores were treated as covariates and the posttest scores were treated as the dependent variables. Paired sample t-test was used to find out whether there was a significant change in the scores from pretest to posttest. The analysis was conducted separately for the fifth grade and the sixth grade.

The qualitative measures included classroom observations, focus groups discussions with the subjects from the experimental and control groups, and teacher interviews. The experimental groups prepared and presented a culminating activity, which was either a service learning project or a simulated congressional hearing. The behavior of the subjects was observed and compared with behaviors exhibited earlier in the school year.

The Fifth-Grade Intervention

The regular fifth-grade curriculum for social studies at Bell Gardens Intermediate School is based on the Houghton Mifflin textbook, *America Will Be*. The fifth-grade control group followed the curriculum as normally taught at the school. The experimental group received instruction integrating the intervention material with the lessons from *America Will Be*. For example, when the experimental group studied Unit III, Life in the Colonies, they also studied the lesson from *Foundations of Democracy: Authority*. During the study of Unit IV, The Struggle for Independence, they also studied a lesson from *We the People*.

During year two, greater emphasis was placed on the instructional methodology stressed in the intervention curriculum, including class discussions, small group work, simulated legislative hearings, and problem-solving activities. The teacher actively engaged the class in reflecting on each learning experience by asking the students to evaluate what worked well and what needed improvement.

The experimental group also participated in a culminating activity. After studying the lessons on *We the People...*, the teacher divided the class into

six cooperative groups. Each group studied in depth the instructional unit assigned. The group then prepared to participate in a simulated congressional hearing before a panel of community resource persons. The students delivered their presentations before an audience of parents, school administrators, and community leaders.

Quantitative Results of the Fifth-Grade Intervention

- **Impact on the knowledge of history and principles of the United States Constitution.** The significant group effect $F(1,59) = 47.96$, $P<.000$ indicated that the curriculum had a positive and very strong impact on the fifth-graders' knowledge of history and principles of the United States Constitution. The experimental group students demonstrated a higher knowledge of history and basic constitutional principles than did the control students (adjusted mean of 16.23 compared to 9.54). The R squared indicated that 47.9% of the variance in the students' knowledge of history and basic constitutional principles can be accounted for by the intervention.

  Dependent t-test indicated that the control group did not show a significant gain ($t = -0.41$, $P<.686$) in the knowledge of history and basic constitutional principles from pretest to posttest (mean of 10.37 vs. 10.07). Whereas, the experimental group showed a significant gain ($t = 10.69$, $P.<000$) in knowledge from pretest to posttest (mean of 8.60 vs. 15.78).

- **Gender differences with respect to prosocial behavior.** The significant gender effect associated with prosocial behavior $F(1,55) = 9.69$, $P.<003$ indicated that the fifth-grade girls exhibited more positive attitudes toward prosocial behavior than boys (adjusted mean of 82.98 for girls vs. 72.27 for boys).

- **Impact on attitudes toward authority, prosocial behavior, cooperation, rules, community, and police.** ANCOVA indicated that, after adjusting for preexisting differences, the intervention did not significantly change the attitude of the fifth-grade students toward authority, prosocial behavior, cooperation, rules, community, and police. Also, the fifth-grade boys and girls did not significantly differ with respect to attitude toward community, cooperation, rules, police, or authority. Failure to show significant and positive change in attitudes could be due to the following reasons: (1) the subjects in both the experimental and control groups entered the study with high positive attitudes in the six clusters targeted (e.g., the pretest mean score for cooperation for both groups was 73.54) and the control group has higher pretest mean scores than the experimental group (e.g., the pretest mean score for prosocial behavior was 78.60 in the experimental group and 81.47 in the control group); (2) the high social desirability associated with some of the items could have affected how students responded to them; (3) some attitudinal changes such as attitude toward one's role in improving the community may take longer to change; and (4) instructional activities designed to have an impact on attitudes toward police were not implemented.

Qualitative Results of the Fifth-Grade Intervention

While the quantitative measures did not indicate significant changes in attitudes toward cooperation, pro-social behavior, and authority, the qualitative measures suggest that the subjects learned to value working in cooperative groups and acting in a pro-social manner, and increased their ability to solve problems related to authority.

The qualitative measures included classroom observations, observations of the subjects during the culminating activity, self-reporting, and focus group discussions. The qualitative measures also included periodic interviews with the teacher.

The purposes of the focus group discussions were to determine whether the intervention improved the ability of the subjects to solve problems and to evaluate whether the instructional strategies used in the intervention curriculum had an effect on the subject's attitudes toward cooperation and working in groups.

Six students from the experimental group and six from the control group participated in the two separate discussion groups. Students were presented with a new scenario related to the content and problem-solving activities presented in the intervention curriculum. The participants were asked to respond to a number of open-ended questions. The subjects in

each group were told that there were no "right" or "wrong" answers, that they were not being graded, and that their responses were confidential. First, individuals read the scenario silently, then the group read it orally. The discussion leader checked for understanding of content as a means of initiating the discussion.

Based on comparison of the number and quality of the responses given by the subjects in the experimental and control focus group discussions (see Table 1), the observer was able to report the following about the ability of each group to engage in problem-solving activities:

- The students in the experimental group were skilled at using ideas about authority to solve the problems presented in the scenario. They recognized the role of rules and people in positions of authority in helping solve problems. They were also able to establish clear and proper scopes and limits on someone in authority to help prevent abuse of power.
- The students in the control group were unsure about how to use authority to solve the problems presented in the scenario. The discussion leader had to prompt most of their responses. They were unclear about the meaning of the concept of authority and how people can use authority to help solve problems.
- With respect to developing rules to solve the problems presented in the scenario, both experimental and control subjects were able to do so. This could be due to the fact that in general all students are familiar with school and classroom rules. There was some distinction, however, in the quality of the rules generated. The rules generated by subjects in the experimental group were more clearly stated and better designed to address the problems.
- The subjects in the experimental group exhibited a higher awareness of their personal rights and were skilled at generating a list of things people in positions of authority should be allowed or not be allowed to do.
- During the focus group discussion all the students in the experimental group were highly active participants. In the control group two to three students participated consistently in the discussion. The girls in the experimental group participated freely but to a slightly lesser degree than the boys. The girls in the control group participated almost not at all and usually only when questions were directed to them by the discussion leader.

Based on comparison of the number and quality of the responses of the subjects in the experimental and control focus group discussions (see Table 2), the observer was able to report the following about attitudes toward cooperation and group work:

- The students in the experimental group exhibit a very positive attitude toward cooperation and working together in groups. They are readily able to evaluate the advantages (e.g., diversity of ideas, learning how others think) and the disadvantages (e.g., disagreement, conflict) of working with others. The students in the control group saw few advantages or disadvantages to working together.
- The students in the experimental group acknowledge that working in groups has helped them acquire more knowledge and information and to learn how to relate to peers and resolve conflict.

As a result of the classroom observations and observations of participation in the culminating activity, the observer was able to report the following changes in attitudes in the experimental subjects toward cooperation and prosocial behavior:

- When the subjects worked in groups earlier in the year, group members exchanged responses to the problems presented. Little cooperation was evident. Subjects rarely challenged the opinions of others. During preparation for the culminating activity, groups were cohesive units in which individuals constructively argued divergent points of view about how best to resolve a problem. Students listened actively, argued ideas, and supported their opinions with evidence.
- During preparation and presentation of the culminating activity, every student in the class participated willingly. Members of individual groups were highly supportive of one another. Students needing help preparing their oral presentation received assistance from others in the group. During the presentation, those who encountered difficulty responding to questions from the panelists received prompts and other support from the group.

TABLE 1: Fifth-Grade Responses to Problem-Solving Scenario

The scenario describes the problems that arose after the principal established a new computer room for the students at an imaginary school.

EXPERIMENTAL GROUP	CONTROL GROUP
1. What are the problems in the story?	
• Kids do not take care of the computers. • When they use things, they do not put them back. • Some kids were hurt. • The kids did not want to share the computers. • They threw trash and no one picked it up. • The students made things worse.	• They broke the chairs. • The kids took the disks and did not return them. • Students were hurt. • They did not let others use the computers. • Ms. Granger closed the computer room.
2. Why did these problems exist?	
• No one was there to make sure the children do the right thing. • They have the wrong attitude. • No one was in charge. • They did not have any rules about using the computers.	No responses
3. What can the principal do to solve the problems?	
• Make rules. • Hire somebody to supervise the computer room. • Have the principal talk to the kids. • Make some rules that would allow the students to do some things and not other things.	• Have some punishment like detention, standing in the corner for 15 minutes. • Get more sturdy furniture so they cannot break it.
4. What are some rules the principal might make?	
• No fighting in the computer room. • Do not take food or paper to the computer room. • You should know how to use the computers. • If they break the computers, they would not play for three months. • No pets allowed in the computer room. • No skate boards or bikes in the computer room. • Clean up the computer room.	• Put the programs away so the kids could not take them home. • You are not supposed to fight. • Let others use the computer also. • Don't fool around with the furniture. • Use the computer for 30 minutes and then let somebody else use it. • Don't fight or you will be punished for 30 minutes and your parents will get a call. If you break any furniture, you will pay for them. • Don't use the computer because it will get damaged.
5. Suppose someone is hired to supervise the computer room. What are three things he or she would be allowed to do? What are some things he or she would not be allowed to do?	
• I won't let her yell at the kids. • I won't let her hit the kids. • I won't let her abuse her power. • He can tell the kids to pick up after themselves. • He can send the kids to the principal's office. • He could punish the kids. • He could take the computer away from them. • I will let him say "no" when the kids do something wrong. • I won't let him arrest the kids, punish the kids, fight with the kids, kill the kids. • He should not abuse his authority. • He should not give them a really bad punishment.	• Put him in charge of kids. • Send the kids to the principal to give them detention. • Make sure that the furniture is not broken. • Make sure that they treat the computer and the disks right.

TABLE 2: Fifth-Graders' Attitudes Toward Cooperation and Small Group Work

EXPERIMENTAL GROUP	CONTROL GROUP
1. What are some advantages of working in groups?	
• You learn a lot. Everybody brings in a different thing. • You can have more than one right answer. • We learn about how other people think. • Everybody has a different idea and opinion. It gives you more to think about. • Others may have an idea that you did not think about. • You solve problems faster. • You get more consequences for the event. • Group work is very interactive and the students share answers with the teacher and themselves. • You learn to get along with each other. • If you are playing basketball with your friends, it helps you learn to cooperate with them.	• Work gets done faster. • We share stuff.
2. What are some disadvantages of working in groups?	
• Some kids think that they are the leader and they have the right answer. We should let other speak. • Everybody want to speak at the same time and call out the answer. • They do not agree on the right answer. There is a conflict. • You have to work out the conflict with the whole group. • Some people play around with other groups.	• Sometimes they don't cooperate. We tell the teacher and they send them to another group.

- During presentation of the culminating activity, students exhibited a high degree of self-confidence in their ability to apply ideas to new situations and to speak before an audience of adults as well as the video cameras recording the event.

At the conclusion of the intervention curriculum, the teacher of the experimental group asked the students to write a brief evaluation explaining what they liked best about studying the *We the People...* materials and participating in the culminating activity. Twenty-four of the thirty respondents explicitly wrote that they liked best working in groups and participating in the activities (see Table 3). During the exit interview, the teacher reported that the subjects had learned to work in cooperative groups, could demonstrate knowledge gained from *We the People...*, and had an adult-like confidence in discussing their ideas (see Table 4).

The Sixth-Grade Intervention

The regular sixth-grade curriculum for social studies at Bell Gardens Intermediate School is based on the Houghton Mifflin series, *Across the Centuries*. The sixth-grade control group followed the curriculum normally taught at the school. The experimental group received supplemental instruction integrating the intervention material with the lessons from *Across the Centuries*. For example, when the experimental group studied the chapter about the birth of humans in their text, they also studied about the Lacandon Mayas, an ancient society in Mexico, from *Codex and Crowns*. As a part of their study on the development of democracy in ancient Greece and the role of citizens in a democracy, students spent two weeks doing a service-learning project. Along with the service-learning project, students also studied the concepts of justice and responsibility from *Foundations of Democracy*.

TABLE 3: Fifth-Graders' Self-Reports About Participating in the We the People... Program

- What I liked is that we learned about the U.S. Constitution. I had never learned about subjects like that. I like doing the problems that were in the book. I also liked the presentation.
- I like this program because it helps me learn about the law and our rights so when we grow up people with more power won't take advantage of us.
- What I like about the *We the People...* is working in groups. It was fun presenting in front of all the parents, a few counselors, and the principal. Every kid in our class got a certificate and a poster.
- The thing that I like was when we got into groups. The group that I like the most was the one when we had to decide to pass the bill on smoking. The thing that I like being with a group is that we have lots of ideas and we share answers.
- The most important thing for me was the presentation.
- Lesson 20 and 21 talks about voting and the responsibilities of citizens. I enjoyed that lesson because we did a little story that was separate. You can learn more things from **Youth for Justice**.
- I enjoy the **Youth for Justice** program and the best things that I liked are having groups and having presentations. I talked about our unit in front of people. When I was talking in front of people, I got so nervous and embarrassed. But I still enjoyed it.
- I liked all the lessons about government and how to vote. What I like the best is working with my group.
- What I like about all the presentations was that we worked in groups and that we shared everything. I also like the book. It was interesting. I also liked that everybody had a turn to speak.
- What I like about the **Youth for Justice** program is when we do presentations. Because we act like if it is a real court and it is like we are representing our own state.
- I really learned a lot in this program. I like working out situations with other students.
- I really liked that were in groups. We could discuss and come out with a solution. That's why it all came out cool.

As the culminating event, the experimental students planned and implemented a two-week service learning project that was linked to their study of the development of democracy in ancient Greece. Students began their project by exploring issues at their school. As part of their research, the students wrote and administered a survey to students, teachers, and parents to determine which school issue they should address. After the surveys were completed, the students tabulated and analyzed the results. They then made graphs to represent their findings visually. The students selected graffiti as their issue.

After the surveys were completed, the students interviewed school administrators, police officers, and others to find out more about the problem—the causes and effects of graffiti and what students could do to address it in some way. The students decided to organize a public relations campaign to raise awareness. They created clever placards and placed them throughout the school and spoke with their peers about the problem of graffiti.

The students presented their service-learning project to school administrators, staff, and parents as part of a culminating event. In addition to the service-learning project, the students also presented other work they had completed as part of the program.

TABLE 4: Fifth-Grade Teacher Exit Interview

1. **Describe your observations about what students learned from the Youth for Justice program.**
   - Lots about the Constitution, our legal system, how our Constitution had changed throughout history.
   - How to work in cooperative groups.
   - How to organize and carry out a presentation.
   - How to support their ideas and opinions.
2. **What changes did you observe in your students over the course of the year as a result of the program?**
   - They felt confident about the material covered and the new information learned.
   - Their curiosity was heightened regarding what they could do to bring about changes in society/laws.
   - They seemed to see the connection between law and their daily lives.
3. **What was the value of having the culminating activity?**
   - It was an invaluable experience.
   - The students could demonstrate the knowledge acquired through use of the *We the People...* text.
   - They "felt adult" confidence in discussing their ideas with a panel of adults.
   - They felt pride.

Quantitative Results of the Sixth-Grade Intervention

The knowledge test had three parts. The first part consisted of ten vocabulary terms related to the sixth-grade social studies curriculum. Of the ten vocabulary terms, six were taken from the text and four were taken from the intervention materials. The second part consisted of three comprehension questions related to rules, teamwork, and leadership. Students were asked to respond in writing to the first two parts. In the third part, students were asked to draw their community, including the most important elements. Two readers read each response. The scores assigned by the readers were averaged.

- **Impact on knowledge of vocabulary.** The significant group effect $F(1,42)=7.07$, $P<.011$ indicated that the curriculum had a positive and strong impact on the social studies knowledge of sixth-grade students. The experimental group students exhibited a higher knowledge of social studies than the control students (adjusted mean of 14.93 compared to 10.53). The R squared indicated that 21.2% of the variance in the knowledge of social studies is accounted by the intervention.

  Dependent t-test indicated that both the control ($t = 3.61$, $P<.002$) and the experimental groups ($t = 8.13$, $P<.000$) showed a significant gain in knowledge of social studies from pretest to posttest. However, the gain was much higher for the experimental group (a gain of 3.5 points for the control vs. a gain of 8.5 points for the experimental). Since at the sixth-grade level the **Youth for Justice** material is taught in combination with social studies, it is expected to see some gain for the control group. However, knowledge gained from pretest to posttest is enhanced when the social studies book is taught in combination with the **Youth for Justice** material.

- **Impact on community.** The significant group effect $F(1,46) = 8.67$, $P<.005$ indicated that the curriculum had a positive impact on the students' knowledge of the community. The experimental group students showed a higher knowledge of the community than the control

subjects (adjusted mean of 20.25 compared to 12.17).

- **Impact on rules.** The significant interaction effect between gender and group, $F(1,41) = 3.89$, $P<.05$ indicated that in the experimental group the boys and girls exhibited a similar attitude toward rules (mean of 63.29 for boys and 59.28 for girls). In contrast, the girls in the control group exhibited a more positive attitude toward rules than the boys (adjusted mean of 64.73 for girls vs. 53.98 for boys). Thus, it can be concluded that the intervention helped to enhance the attitude of the sixth-grade boys toward rules.
- **Gender differences with respect to authority.** The significant gender effect associated with authority $F(1,41) = 5.05$, $P<.031$ indicated that the sixth-grade girls exhibited a more positive attitude toward authority than the boys (adjusted mean of 54.75 for girls vs. 42.84 for boys).
- **Gender differences with respect to police.** The significant gender effect associated with police $F(1,40) = 4.76$, $P<.036$ indicated that the sixth-grade girls exhibited a more positive attitude toward police than the boys (adjusted mean of 62.69 for girls vs. 47.39 for boys).

ANCOVA indicated that after adjusting for preexisting differences, the intervention did not have a significant effect on the attitude of students toward authority, pro-social behavior, cooperation, community, and police. Also, the sixth-grade boys and girls did not significantly differ with respect to attitude toward community, pro-social behavior, cooperation, and rules.

Qualitative Results of the Sixth-Grade Intervention

The purpose of the focus group discussions was to determine whether the intervention improved the ability of the students to understand more about the importance of rules, responsibility, and teamwork, and to evaluate the effectiveness of the intervention materials.

Students were presented with a new scenario similar to the scenario in "Codes and Crowns," and were asked to react to it by responding to several open-ended questions. Seven students from the experimental group participated in the focus groups (four boys and three girls), and six students form the control group (four girls and two boys). The subjects in each group were told that there were no right or wrong answers and that they were not being graded. First the students read the scenario individually. Then different students read portions of the scenario orally. We checked for understanding of the content of the scenario.

Based on the focus group discussions, the observer was able to draw the following conclusions:

- The intervention materials helped the students develop a more positive attitude toward social studies. Although the control students were smart and motivated, they did not seem excited about social studies. They found the subject hard to understand and irrelevant to their lives. The experimental students found the material interesting and engaging. They particularly enjoyed the role plays.
- The intervention materials helped the students develop a positive attitude toward rules. The control students associated talking about rules and law and being bad. They indicated that discussions about rules happened when the students were in trouble with the teacher. In contrast, the intervention materials give the opposite message. The experimental students felt that rules served a positive function, and were needed to prevent violence and accidents.
- The intervention materials developed an awareness in students of their rights and responsibilities, and the rights of others. The awareness level of the experimental students around these issues was significantly higher than that of the control group.

Table 5 presents comments from the teacher's exit interview.

The "At Risk" Intervention

The "at risk" intervention was designed for students the school identified as needing special attention because of problems with truancy and potential gang-related activities. The 12 "at risk" subjects in year two of the study were assigned for one semester to a self-contained classroom. The subjects were seventh- and eighth-graders. The group was balanced with regard to gender.

TABLE 5: Sixth-Grade Teacher Exit Interview

1. Describe what you feel your students learned from the Youth for Justice materials.

- My students learned how to connect the events of the past to their lives today.
- They learned about why we have rules, how to work together as a team, leadership, cooperation, democracy, responsibility, justice, etc.

2. What kinds of changes did you observe in your students over the course of the year as a result of the lessons?

- I observed the students learning to cooperate together as a team.
- They began to understand that leadership does not mean always being the controlling member of the group.
- Cooperative learning groups began to work better in *all* areas of the curriculum.

3. What was the value of having the culminating activity?

- The culminating activity really helped to pull the year in social studies together. The students really understood all the links between the past and the present when we looked back and reviewed. They were very proud and excited to present their culminating activity.
- Many of my students are now in the $7^{th}/8^{th}$ grade elective "Youth for Justice." They came back to tell me and were very excited. Social studies became their favorite subject last year.

The intervention curriculum included lessons from *Violence in the Schools: Developing Prevention Plans*; *Foundations of Democracy: Authority and Justice*; *We the People...*; and *It's Yours: The Bill of Rights*. The culminating activity was a presentation of their violence prevention plan to parents, school administrators, and community leaders. The groups also participated in a service-learning project.

Because of the small number of subjects as well as the lack of a control group, quantitative statistical measures were not used for the evaluation. The qualitative methods included classroom observations, focus group discussions, and interviews with the subjects (see Tables 6 and 7).

Based on classroom observations, in contrast to the year one intervention, the subjects:

- were more disciplined
- had a more positive attitude
- used four-letter expletives less often
- showed a higher interest in learning, and
- became more involved in the intervention materials.

The teacher:

- had greater control of the classroom situation
- placed more emphasis on academic achievement and student accountability
- implemented more of the intervention program.

Also compared to the first year, there was less parental involvement and fewer services from agencies such as juvenile probation.

Based on students' perceptions, the interventions helped them:

- learn more
- have fewer discipline problems
- have better attendance at school
- receive more individualized attention, and
- behave better.

TABLE 6: "At Risk" Focus Group Discussion

1. How have you changed as a result of participation in this class?

- I learn more.
- I used to ditch. I do not do that any more.
- I did not used to do my home work. Now I do.
- Now I do my work.
- I am not getting into trouble.
- I am not missing school. I come every day.
- We do not fight much.
- We do not talk back to the teacher.
- Before I talked back, ditched, fought, threw tables, threw gum in people's hair. I do not do these things any more.
- I do my homework more often because I understand it.
- I did not do the work in social studies because it was too easy. I do it more often now.

2. What do you like about this class?

- The material is interesting.
- It is more fun.
- It shows us how to stay out of trouble.
- It is better reading.
- You learn how to stop violence.
- You stop violence.
- You get more attention in this class.
- There is more help in this class.
- There is less students in this class.
- I like it because a lot of people like the board members, the teacher, and the principal talk to us.
- Other teachers do not explain. Here you can ask as many questions as you want.
- We have more work, but we learn more. This is why we are here.
- In regular classes the teachers do not make the material interesting. Here the teacher makes the material interesting.
- This class gives us more things to do. I learn more here.

TABLE 7—"At Risk" Group Student Interviews With Observer

1. What is the most important thing you have learned in this class?

- When the teacher criticizes me, I have learned to take it. When somebody hits me, I do not hit them back. The principal is like a dad to me. He always talks to me. So, I have learned not to answer back and not to hit back.
- We are doing projects. We are learning about violence. We have learned not to fight. We have learned about prevention; you can solve problems without fighting.
- To respect others. Not to talk back to people. Not to fight.
- I used to ditch class and I don't any more. I did not do any work on homework before. Now I do them. I am more interested now we have more help and attention.
- The regular teachers think that we are bad and that is why we are here. They are not going to let us in their regular class unless we get our act together, do the work, and behave. The class has taught me that I should not talk back to the teacher and I should not throw balloons in the bathrooms.
- I learned about violence, about kids killing each other because of drugs and alcohol. I do not think it is right. It is like throwing your life away.
- I have learned how to get along with people and how to work with people. Before I did not want to work in a group. Now I like to work with a group. I changed since I came to this class.
- Before I ditched, I talked back to my mom and I did not listen. Now I am respectful. I do not talk back to the teacher. I feel happy in the school. I do not fight. I do not have problems in the school.
- To keep my temper down I do not get mad that often.

2. In what ways have the books on Violence, Foundations of Democracy, and the Bill of Rights helped you?

- We did not know about the Constitution. Even if we do not use it now, we will use it when we grow up. We wrote about two violent things that we heard on the news. There are a lot of crazy people out there. We do not want to be like them. Before I did not care. Now I watch the news.
- It taught me never to bring drugs to school. I learned to stay away from drugs and not do them because you risk your life. Before I thought that drugs were cool. Now I do not even think about them because I know that they are not good for your health. Before I talked back to the teacher and my parents. Now I respect them.
- The major things that I have learned in this class has been because of these books.
- They helped me. I learned to do projects about violence. Drugs could kill you. Before I used to think about drugs and gangs.
- We have learned about the Constitution, violence, how big kids pick on little kids, and that drugs are wrong. Before I thought about drugs. I don't any more. I wanted to know how rock works. I wanted to try marijuana. I do not care any more. They are bad for your health and you could get arrested if you possess them.
- The Youth for Justice books have helped me learn to stop violence. For example, I have learned when students do not bring guns to school there will be more security. Another example is that we can have flyers that say only those students who want to help stop violence can come to school.
- I have learned about what kind of rights you have and how to stop violence.
- They helped me understand things that I did not do before. They helped me control my anger and behave better.

- I came late. I did not do these books. I got to read the book in a group. I learned that drugs do not take you anywhere.
- Violence prevention to fight problems like if anyone goes up to me and want me to get into a fight, I stay away. For example, if they say that I was talking trash about them. These books are more fun. You get to work in a group.

3. What have you learned from the service project?

- We are going to clean up the beaches. I think it is a good thing to do because we use the beaches. So, if we all pick up after ourselves, it will be clean. Before I did not care. This class taught me a lot.
- I look forward to service learning because beaches are dirty. We want to make the city clean. Before I did not even think about it.
- We have started the service learning. We are going to clean the beaches. Before I never thought about these issues. We never talked about it in my regular classes.
- I am excited about the service learning project. It will be fun. We will not be here.
- I like the beach to be clean.
- We are going to clean the beach.

These perceptions are very similar to those expressed by the students who participated in year one of the intervention.

Based on the students' perceptions, the intervention materials help them:

- learn about the Constitution
- learn about their rights
- not to bring drugs to school
- learn that drugs are not good for you
- stay away from drugs, and
- learn how to stop violence.

It must be emphasized that the above statements do not represent cause-effect relationships. Since there was no control group, it cannot be concluded that the changes in the students' perceptions and behavior are a result of the intervention.

Recommendations

1. In order to evaluate the change in students' behavior, it is suggested that the control and experimental group teachers rate the behavior of students on selected characteristics believed to be enhanced by the **Youth for Justice** curriculum. Rating should occur at the beginning, middle, and end of the intervention. Teacher ratings are a more valid index of the change in students' attitude and behavior than students' self-perceptions.

2. Have the parents rate the behavior of their children on selected characteristics before and after the intervention. These characteristics will be selected based on previous findings and seeking the opinion of curriculum writers and those individuals who have an extensive background with the implementation of the **Youth for Justice** curriculum. The questionnaire needs to be translated to Spanish then translated back to English.

3. To investigate the impact of the **Youth for Justice** curriculum on the upper level thinking processes, it is suggested that some content questions be included at the higher levels of the cognitive domain including application, analyses, and synthesis. A detailed rubric needs to be developed for grading these questions.

4. Have the teacher spend at least two years with the **Youth for Justice** material. Our observations indicated that the second time around the teachers were much more confident, used the material more

often, and did a much better job of teaching to the goals of the curriculum.

5. Have the teachers who have two years of experience with the **Youth for Justice** curriculum play an active role in teacher-training workshops that are held for training future teachers. Have them share experiences on how they used the material, what things worked, what things did not work, and what they did to improve things.

6. To evaluate the impact of the intervention on student attitudes toward issues such as police and authority, use scenarios that allow the subjects to identify with roles being portrayed in a given situation.

Final Evaluation Report: Violence-prevention Outcomes in Civic Education

(Excerpted)

Introduction

The VOICE program is the latest in a series of efforts to help schools develop curricula that can effectively and positively teach key points about government, the Constitution, the courts, and the approaches that underlie these institutions in ways that will affect behavior and reduce violence in society. VOICE is based on a series of concepts described by its developers, the Constitutional Rights Foundation-Chicago and the American Bar Association, as follows:

> The project explores linkages between violence prevention and law-related education through the development, implementation and evaluation of a seven-unit, yearlong fifth-grade law-related education curriculum emphasizing understanding of law and government using interactive strategies and community resource persons. The curriculum integrates conflict resolution skill building and a service project with traditional social studies content. Over the course of a full academic year, the curriculum moves students through stages of understanding, skill development and attitude change beginning with individual knowledge and skill enhancement, followed by understanding of group membership and concurrent group participation, and concluding with awareness of their community and a service learning activity.
>
> The program's learning objectives are grounded in the research on violence and effective violence prevention, experiences of the program developers and Chicago and Elgin teachers, the Chicago and Elgin Public Schools' and Illinois' fifth-grade learning outcomes, the purposes of conflict resolution and law-related education programs, and research on law-related education. Each of the sequential lessons is designed to meet measurable objectives consistent with the framework presented on p. 18.
>
> Lesson objectives are delineated in the areas of student learning (e.g., the purposes of government, ideals of American democracy, and constitutional and legal issues in American history); student skill development (e.g., inquiry, public discourse, and decision making and problem solving); student beliefs (e.g., individual and public good, importance of public discourse, inquiry and decision making, peaceful conflict resolution); and student actions (e.g., responsible personal conduct and community participation).

Evaluation of the VOICE program was to examine ways that increases in students' knowledge and skills affect their beliefs and actions about resolving conflicts peacefully in our society. Both qualitative/ethnographic and quantitative evaluation methods were used. The following sections describe the qualitative methodology, results of the qualitative study, quantitative methodology, and results of the quantitative study. The final section presents conclusions and recommendations based on both aspects of the evaluation.

The VOICE program was evaluated by staff and consultants of the Social Science Education Consortium, including James R. Giese, Donald P. Scrimgeour, and Susan Hyatt.

	Law-Related Education Content and Methodology	Conflict Resolution	Service Learning
Knowledge	Understanding of law, history, and government	Understanding of alternatives to violence	Role of individual participation in democratic society
Skills	Problem solving, analytical and group participation skills	Individual mediation and negotiation skills	Problem solving, analytical and group participation skills
Beliefs	Faith and confidence in institutions and the people who are part of institutions	Commitment to alternatives to violence	Willingness to participate in addressing challenges in their school community
Actions	Use of formal institutional means of resolving conflict (classroom and school processes as well as other government procedures)	Use of mediation and negotiation in resolving conflicts	Responsible personal conduct and community participation

Qualitative Evaluation Methodology[1]

The qualitative or ethnographic researcher concentrates on capturing, understanding, summarizing, and interpreting experiences based on the accounts given by those who have had the experiences. There is an important interplay between the researcher and those who describe their experiences. Both are responsible for "making sense" of what they see, hear, and do. One of the major benefits of ethnographic research is the accuracy of the language in its context; i.e., what people have to say about their experiences is what it meant to them. Neither the truth or falsity of their statements, or their motives for their explanations are necessarily in question. The focus is on what did they get from this experience, what does it matter or mean to them. Enough of these accounts will give us a picture of those experiences in their respective contexts. When those accounts are drawn together in categories, we can begin to form a clear picture of the experience in the participants' words. We can then give our own sense of it by adding our interpretation to the categories and the accounts.

Four sources of qualitative information were used in the study:

- Tape-recorded comments made by students in focus group sessions held in spring 1997 in selected fifth-grade classes in Chicago and Elgin, Illinois schools. Each group consisted of five students. Students from seven different schools participated in the focus groups and slightly more than 90 percent of the students in the experimental groups were interviewed. The students' comments were made in response to two sets of questions: open-ended interpretive questions and specific response questions.
- Tape-recorded comments made by teachers and administrators during the same time the focus group sessions were held with the students.
- A videotape recording of preparations for and delivery of service learning projects at one of the schools.
- Notes on working group sessions held with teachers and administrators throughout the school year.

In addition, other materials were reviewed to help understand the VOICE program, most importantly, a description of the **Youth for Justice Research &**

1. The author's role in dealing with this information and evaluating the program was that of a secondary researcher, i.e., the evaluation was done based on information received after the program had been conducted and the information had been gathered.

Development Project: Linking Violence Prevention with Law-Related Education: Chicago Public School 5th Grade Social Studies and the **I'm A VOICE Ask Me!** curriculum prepared by the Constitutional Rights Foundation-Chicago, with assistance from the American Bar Association.

This evaluation is a way to understand how fifth-graders (and their teachers and administrators) view life, especially with regard to violent behavior. We shouldn't be surprised to learn that a fifth-grader's view of things is simple at times and complex at others. The responses that fifth-graders make reflect their age and experience. Their responses are not made necessarily in the sophisticated language of courts and judicial tracts, although at times they use this terminology very precisely. Nonetheless, their statements represent accurately what they have experienced and their reactions to the experiences.

These reactions are exactly what we are looking for. It is often too easy to dismiss students' comments as trivial or unimportant, even sometimes those that seem as if they were just comments made in passing or humorously. It can often be exactly these kinds of remarks and descriptions that are the most informative, even when the children are unsure of how they feel and express their reactions in statements such as "some good, some bad." There is a great deal to be learned from hearing the students talk in their own language, and doing our best to listen as if we were fifth-graders ourselves again. How they incorporate learning into their lives, change their behavior, change their views of what is going on around them, and assess the influence or power they have over their environments can be gleaned from these accounts.

The evaluation was based primarily on a set of eleven audiotapes. The tapes were reviewed to understand the questions asked by the focus group interviewers as well as the responses given by the students. In the section entitled Open-ended/Interpretive Questions, the questions asked by the focus group interviewers are listed first followed by selected comments.

Although there are some variations in which questions were asked and how they were phrased in the different focus groups, enough common questions were asked to form a list that serves also to describe the primary issues of importance to the interviewers. Because of the limitations of time for both the researcher and the reader, selected statements are presented to represent the points of view of the students and teachers rather than whole transcripts.

The focus group recordings were made on eleven 90-minute tapes. The individual sides of the tapes vary from completely blank to completely full. Working without a transcript of the sessions, comments had to be selected somewhat arbitrarily from the significant amount of material available. An attempt was made to select the best descriptive comments made by the students based on detail, depth of insight, strength of the response, or most commonly occurring responses, and to list these under the appropriate question. The quotes selected for inclusion are intended to be illustrative of the students' comments, but are by no means exhaustive.

Qualitative Evaluation: Results

The protocols for the focus groups were standardized around two general sets of questions: Open-ended/Interpretive Questions and Specific Response Questions. However, even the Specific Response Questions involved discussions with the students. Some of these comments are also included in the Specific Response Questions section.

Open-ended/Interpretive Questions

The experiences the children had with VOICE and their interpretations of the program were sought through several questions that asked what they learned, what they remembered most, how they would describe the program to fourth-graders, and how it compared to conventional social studies classes and others. These questions and the students' responses were recorded. Although the core ideas were similar, the specific questions were modified somewhat according to the facilitators' judgments and style, and in some cases, certain questions were asked only once or a few times.

The focus of this section is on the responses the students made both to specific questions and as reactions to the whole program. Both types of questions were asked in these focus groups. The re-

sponses to these questions were open-ended and all the children in each group were encouraged to participate in answering them.

Several of the stories and exercises that the focus group sessions refer to were designed to help children consider how violence and conflict emerges, what its causes are, what social institutions have been created to deal with it, what some common, real-life examples are, and how fifth graders can get involved in thinking about how conflict can be understood and avoided, resolved or contained. The questions and selected student comments from the recordings follow.

What do you remember about the specific exercises you were taught?

- "I learned a lot more stuff...about my rights, freedom of speech, right to bear arms."
- "We got to go places, like the Police Academy."
- "Got to do a lot of projects, what president would be the best, what qualities make a good policeman."
- "Police need to have a female on site before doing a search."
- "Before they put the handcuffs on them and put them in the squad car, they have to tell them their rights, before they arrest them, didn't really know before."
- "Protective clothing."
- "Can't approach people fighting without calling for a squad car."
- "(I learned about the police) utility belt, everything on their...how police can defend themselves, can't hit them in the head or private parts, can't hurt the suspect, off limit areas."
- "Didn't know they had so many rights."

Little Red Riding Hood

- "That was the first one in mediation. The wolf and Red Riding Hood each told their own stories."
- "We read it out loud. (They) ask Little Red Riding Hood and the Wolf all these questions."

Jack in the Beanstalk

- "Best one."
- "How people worked together, no one was fighting."
- "How it was like real life court "

How did VOICE compare to other things you studied in social studies before or to other social studies classes, like history?

- "I think social studies is boring in a way."
- "They make it fun."
- "It can help you solve problems."
- "VOICE... it teaches you about violence and stuff, and other social studies they just talk about history and (in VOICE they/you) try to have more fun than regular social studies."
- "Kind of worse."
- "Sort of good, sort of bad."
- "Sometimes fun learning about the different branches of government, the different court cases, the different parts of the government."
- "Better than usual social studies."
- "It's not boring."
- "More fun because you get to go on more field trips."
- "Funner than normal social studies, (where you) memorize your states and capitols, memorize everything for a test, do this, do that. (With VOICE)...you've got it all in a packet right in front of you and you just have to open it up and look.
- "Not reading from the book."
- "The book is history, a lot of this is right now."

If you had to tell somebody who is going to be in the fifth grade next year what this thing was all about, what it was really trying to teach you, what would you tell them?

- "It's about the ... (number of) terms (a congressman can serve) and which powers does the president have, and which powers does the Congress have over the President."
- "How we have a Constitution and a Bill of Rights."
- "You learn about courts, and your rights to a fair trial."
- "You have to study more for like tests and stuff, study as much as possible, study more than the day before you have a test."
- "Tell them that they are very lucky kids to be able to have these kind of packets, because I think they are really fun, time consuming too. If you have lots of time left and you don't have anything to do, you just flip through there."
- "Something fun."
- "Helps you laugh."

- "They can learn lots of stuff like Congress and the Constitution, courts, rights and responsibilities, how to keep yourself out of trouble in the future."

What about the content, the things you study?

- "Hard."
- "Lots to learn."
- "New words."
- "Kind of little bit easier than normal things because...there are different kinds of tests that you don't really get to write anything down and you have to keep it all in your head but then before the test you can just look through it and look at the things you have written down and you can highlight anything instead of just being in a normal book where you just have to look."
- "I think what really makes it exciting is the activities you do like have your own court system and stuff like that."

Is there anything that you remember about VOICE that sort of just sticks in your mind, sort of jumps out when you think about VOICE, you think about something in particular? What stands out (as most important)?

- "Funny pictures. I love those pictures."
- "What pops into my mind is the Jack and the Beanstalk trial. I loved that one."
- "Jack and the Beanstalk was like a little fairy tale and kind of a little different too and you just put them, you have a court with them and you know in your mind that back then they probably did not have those kinds of fights and stuff, but...it's really fun and also funny too."
- "(We) all ended up bursting in giggles at the end. It's funny."
- "I liked it because they had all the jury members present (play roles)."
- "I liked it. I got to play a chicken. I had a beak, a chicken thing, a chicken mask."
- "How to solve problems without fighting, conflict mediation."
- "Thought there was just one kind of court, there's a lot, Pro Se, civil."
- "The Constitution."
- "Immigrant from Albania...lucky to be living in America because we have more freedom."
- "No homework."
- "Notebook, collected our work in it, writing, drawings."
- "Liked the role plays."
- "During role playing, kids trampled the garden, (I) got to play the lawyer, did a court case in class, figure out evidence. They had to give 72 hours of labor or $550 to replace the damage."
- "Trial about a man who went to the bakery to buy a cake for his daughter and they spelled the name wrong on the cake and then went to court and he wanted his money back. The bakery man won the (trial)."

What did you think about the Mayor's Speech...the city budget, and (so forth)?

- "Confusing because you had to get the money exactly or it wouldn't work. More challenging than your original everyday work that you do at school. It was like nice and challenging and it put your brain to work."
- "You had to be good at math to do that. (You had to) be like the governor and think about what chief should do this and what chief should do that and you had to come up with the same amount of money so then you didn't have any extra money."
- "We didn't have enough information. We didn't have like the background on the kids..."
- "The budget, it was fun."
- "We had to answer a question about what the mayor was doing with the city, which way it was better to spend the money."
- "It was cool."
- "Shouldn't spend a whole bunch of money for something that you don't really need."
- "Had amount of money to give the community, figure out ideas of what to do with the money, i.e., put toward more policemen, better patrol cars, more protection, better vests, not regular old vests, more police to help reduce crime, put it toward more education, food and clothes.

Basketball in the Park?

- "We said there should be a time limit (for how late they get to play basketball) that would be different for weekdays and weekends."
- "(Our working group came up with)...special glass to protect the players, change gravity so ball won't bounce."
- "Learn to play before it gets dark, and then go home."

Salem Witch Trial?

- "Liked Salem Witch Trial."

Police Call role plays?

- "(I) enjoyed playing police and criminals being arrested. Don't want to get arrested for real."
- "We did one like that where we wrote down what the qualities that a real police officer has..."
- "Like eyesight and..."
- "It was sort of interesting. It wasn't as confusing (as the Sacred Blade)."
- "They're trying to help you not hurt you."

The Sacred Blade?

- "Confusing really, but I really liked it because he really didn't mean any harm. (You) think in your mind that it's wrong, then you think that it's right."
- "That was pretty exciting."
- "The one where the kid brought the knife to school."
- "(It was interesting) because he was breaking the rules because he wasn't supposed to bring a weapon to school, but it was his religion so they had to go to court and see if he could use that to practice his religion...And the constitution says that we can practice our religion."
- (The lesson learned about that was...) to not bring weapons to school or what would be considered weapons...like (is a) butter knife (a weapon?)
- "That was a tough choice...because it was part of his religion which he should follow, but then it's also a school rule he should not bring a knife."
- "We learned something about religion while we were doing it."

"What are some of the steps in the mediation process?"

- "Don't take sides. Take turns speaking and listening. Ask them how they feel. Tell them to each say what their side of the story is. Brainstorm ideas."
- "Introduce yourself. (Ask) what's the problem. Confirm what (it is.) Ask what they want and why. (Ask) how they feel. Get in the other person's shoes."
- "Explain the basic rules, then you give ideas, like you ask for agreement. And then you summarize the agreement, then they shake hands if they want."
- "People who want to be mediators. She (the teacher) picks two students assigned for the mediators."

Are there any other ways you've used that information in your lives? Can you think of examples?

- "(With my) brother and sister."

Have you made any different choices having had this class?

- "I used to always go to 7-11 but not anymore, (I now) go home after school, when kids start picking on me I just go home, don't go out after dark."
- "What do you mean, like, you would start a fight with somebody, and like you changed your mind after we studied about mediation and all that stuff."
- "I always thought that lawyers were mean and greedy, but now I know they're not."
- "...Because we've been doing mock trial, we learned a lot about lawyers. And then, we really need 'em to help us to solve our case, win our case..."
- "We found an easier way to stop violence, yeah, mediation. I would never think of like solving a situation by talking and stuff, cause you would get real mad and just start physical and all... So that showed you how to solve problems."
- "And then I showed two kids how to solve a problem by not fighting, by using conflict mediation. I learned a lot from that.

Have you changed any behaviors in anything you've done? Have you learned other ways to solve conflicts?

- "Be patient."
- "I'm already a conflict manager. (It's like that.)"

How could your teachers make this program better next year? How could it be made more interesting?

- "Let everyone get into the thing instead of just a few people in each skit."
- "That's probably the only thing because she usually talks about it with us and everything. She shows us everything we have to do."
- "More activities, more role play."
- "Kids act out more stuff."
- "More tests, one or two more."
- "More roles."
- "Add more trials."
- "Tougher questions."
- "More words and more questions."
- "More background on all the characters."
- "Tell what happened at the end of the story(s)."
- "More stories."

- "More field trips, more activities, more speakers."
- "Explain it more, better...Explain the method, about the mediation, and then why we're doing VOICE, and what is VOICE."
- "They should give us a test...part of the way through (on whether we're fighting in our class) like how well did you learn conflict management."
- "That should be at the end...see what you learned all year."
- "(Than) If you just read, it would be less boring."
- "We (could) do less reading and more action."
- "And explain it slowly, so that we could like learn (it more completely)."
- "We can do more activities like mediation classes and more stuff."
- "More activities to help the children learn what it (VOICE) is...more skits, raps, plays, puppet shows. The VOICE period should be longer and it shouldn't be at the end of the day because you can't fit it in to all the time (in the amount of time) at the end of the day."

Did you do any service project for your school? (See the section below on the Service Learning Project Videotape.)

- "(We did a) service learning project puppet show skit..."
- "Also little stories in the book. Mock trial. It's really fun. We get to work with it. We get to rewrite it."
- "It's about a real issue. (We get to) say our own ideas."
- "We read stories to second graders."
- "All of us made a book, a mixed up, twisted and turning fairy tale."
- "We went to pick up garbage outside. We wanted to make the outside of our school a little bit cleaner and nicer (because it) looks like junk, everybody dumps their junk down in front of (it)."

Most important thing you've learned in VOICE?

- "How to make our community a better place."
- "About lawmaking, if you want to get into Congress later."
- "Mediation, like if people get into a fight, you help them solve it or do something like that."
- "Mediation, how to solve the problem."
- "It's a program about the government."
- "You learn a lot of things... the three branches, the Supreme Court."
- "I learned a lot about government, laws, and history from VOICE."
- "VOICE helped me very much in mediation and the Constitution. It taught me a whole bunch of things I haven't known."
- "VOICE is a very good program and it could be in other classrooms too."
- "More teachers should get involved...involve their class in VOICE."
- "They'll have a nice time and they'll learn more."
- "You like, you're helping the community."
- "You learn to communicate, like non-violence."
- "Like there's a club for 4-H, you should like have a club for VOICE."
- "It helps you learn and it helps you stop violence without the physical (stuff)."

So, have you actually done some of that? Do you find that you do anything different now that you've studied mediation?

- "It tells us to be like more friendly and to think before you act."

Is there any one thing that you think would help people not fight so much or have so much conflict?

- "Put yourself in the other person's shoes."

Did any police come to your class?

- "No, we had a lawyer come."

How was that when the lawyer came?

- "That was awesome."
- "She had some really good stories to tell too."
- "She had some about real stupid criminals."

Specific Response Questions and Issues

A set of 13 specific questions was asked each group by the facilitators. Students were asked to rate their responses to each of the questions on a scale from 1 to 4, with 1 a definite NO!, 2 a no, 3 a yes, and 4 a definite YES! The questions, the percentage responses to each, and a mean are presented in Table 1. These questions were also the focus of interviews, and some of the responses to them are discussed in this section as well.

The greatest percentage of responses fell in either the yes or the definite YES! category for 11 of the

13 questions. Seventy-eight percent or more of the students responded positively by answering yes or YES! on these eleven questions. The two questions that received only 30 percent (30.4) and 50 percent (50.5) positive responses, respectively, asked about using mediation skills at home or with their friends. These questions required students to actively intervene in a conflict in settings where conflict has been a common form of problem solving, according to the students' responses.

Although several students said they had used mediation skills at home or with friends, several said no, expressed reluctance to answer, found the question funny, or expressed some discomfort in answering it. These responses result presumably because putting the mediation skills into practice outside the classroom represented a new way of thinking and acting for them and those with whom they might try the techniques. Also, they may not actually be in a position at home to try a mediation for one reason or another.

TABLE 1: Summary of Focus Group Responses, May 1997

Item	Percentage of Students				Mean
	1—NO!	2—no	3—yes	4—YES!	
1. I learned a lot about government, law, and history from VOICE.	2.1	10.4	36.3	51.3	3.4
2. I have a better understanding of the reason for rules and laws.	2.1	5.8	32.9	59.2	3.5
3. I have a better understanding of how to solve problems for myself.	1.7	5.8	27.1	65.4	3.6
4. I have a better understanding of how to help others solve problems.	2.1	8.8	35.0	54.2	3.4
5. I learned other ways to solve problems than by fighting or using violence.	7.5	7.9	19.6	65.0	3.4
6. I now use mediation and negotiation skills at home.	49.6	20.0	18.3	12.1	1.9
7. I now use mediation and negotiation skills with my friends.	27.1	22.5	28.8	21.7	2.5
8. I am now more aware of my rights.	2.1	4.6	16.7	76.7	3.7
9. VOICE helped me better understand that I am responsible for my conduct.	4.6	10.8	33.8	50.8	3.3
10. VOICE showed me that learning can be fun.	8.3	7.5	25.8	58.3	3.3
11. VOICE taught me to respect the opinion of others.	2.5	14.2	28.3	55.0	3.4
12. I learned that I can make a difference by helping others.	9.2	12.9	31.7	46.3	3.2
13. I learned that working in small groups is helpful because more information is shared.	4.6	15.4	18.8	61.3	3.4

These generally positive responses are significant because actually using an intervention like mediation, especially in settings where roles have been strongly and traditionally defined, is a major new behavior, and one that likely presents a certain amount of risk both physically and emotionally. Students might be viewed as upsetting the cart, trying to assert their own power, threatening the system, being too passive in a violent world, or simply trying to change things. Although mediation techniques and processes can have a powerful effect on students' lives and those of their family and friends, introducing mediation to those who have not had such training, especially for the first time, depends on many factors that need to be taken into account during their training including what the environment is like outside of class, at home, and with friends.

Videotape of Service Learning Projects at Haugan Elementary School

Preparation for and presentation of three of the service learning projects at Haugan Elementary School was recorded on videotape. The videotape shows the efforts that three groups of students from one fifth-grade class made to prepare for and complete their projects. The projects were a puppet show, a rap song, and an enactment of a problem solving/mediation session.

Considered along with the comments the students have made about the various aspects of the program, it is clear that VOICE offers a series of lessons in a variety of learning approaches that provide students the opportunity to thoughtfully consider issues about violence and alternative institutional and personal responses to it. The teacher's work in the particular sessions captured on videotape reinforced not just the lessons but some of the important elements in making effective and professional presentations.

Both through action and opportunity for thinking about common situations in new ways, the students have been given several learning experiences that can be continued and reinforced through the years to help them learn how to deal with the problems of the society in new ways designed to reduce trouble and conflict rather than to continue it or to ignore it.

The principal at Haugan Elementary served as a resource person in the VOICE classrooms on several occasions and reported that this was the only opportunity she had ever had to engage in a real and productive exchange of ideas with students over issues of school safety.

Interviews with Teachers and Administrators

Focus group interviews were also done with teachers several times during the program. These interviews were summarized in staff notes. These notes show that the teachers learned about the program over time (in comparison with the previous year and during the current year), and discovered what the students liked, what they found difficult, and what they themselves liked and didn't like about the program. It is also clear how important the opportunity to participate in developing the program is to the teachers, and how important the participation of staff throughout the program can be. Some of the issues raised in these groups are illustrated below, as presented in the staff notes.

- August 16, 1996
  - There was concern about questions involving skills some students wouldn't have. Since some Elgin students have had mediation training, however, they would understand. Staff explained that since the pre/post-testing measures change in knowledge and skills, it is fine for students to lack these skills at the beginning. Students who didn't know answers could leave them blank.
  - Teachers mentioned a potential future problem. For them, much of the excitement of the curriculum is having input into its development. It gives them a unique opportunity to discuss its effectiveness and make an impact. They are uncertain how to keep it as interesting and motivating in the future.
- September 11, 1996
  - A teacher asked about the possibility of some tests in Spanish.
  - Regarding the election section, immigration seems to be a "hot" topic among students.
  - The suggestion was made (based on Addams Elementary interviews) that students person-

ally write to staff and/or lawyers two times during the semester. Then the students would receive personal letters in return.

- October 16, 1996
  - Comments were made that the units are clearer and generally better. One teacher liked Unit III best of all last year and continues to enjoy it.
  - Teachers said that Unit III did not supply pictures and suggested taking them out anyway and having kids find examples in newspapers and magazines.
  - Teachers suggested that the final version be in a workbook format for kids and that the teacher guide not be separate. One participant said that students liked the fact that VOICE is not a textbook. Other teachers agreed.
- December 4, 1996
  - One teacher commented about having some difficulty with mediation because the skits end up feeling staged rather than natural. Further, because of the strict way in which the school is run, this teacher said that there is little opportunity for children to use mediation. Staff commented that it might be possible to have a Spanish-speaking mediation specialist come to the classes.
  - One teacher said her children loved the "Sacred Blade" exercise, as soon as they found out it was a real case.
  - Another teacher said his children loved the role-playing aspects of the above lesson. He had to marry off all of the students in his class so that everyone could be a concerned parent.
  - One teacher found the Preamble lesson boring last year and altered it this year. Problems last year included the fact that it took children a very long time to look up the words in the dictionary. This teacher also thought that other parts of the lesson took too long. The teacher amended this problem by having students bring articles, interview their parents, and make drawings illustrating the meaning of concepts in this section. He also brought many pictures and articles to class to help explain concepts. They talked about the words as a class, which he finds faster and easier for children to understand. Students also taught each other. Students did very well on the unit test, which included cartoons of the witch trials.
  - Some teachers would like the CPTA visit to last longer. They would have preferred for students to have taken a more active role in the solution at the crime scene, and for the cadets at the physical fitness training to do more. Staff would like to take schools through one at a time, so the sessions are less repetitious, and therefore more interesting to officers. Another benefit would be that only one staff person would be needed.
- February 11, 1997
  - One teacher found Unit III lacking in content, especially historical content. The reading on Life in the 1770s was too brief and easy for her students. She has gone back to a standard text to cover the Revolutionary War (information she mentioned was necessary for standardized tests), and will return to VOICE to cover the Constitution. She also said that she found few opportunities for student evaluation in the unit and would like more opportunities for students to do research. She added that she is having students read historical novels to add content. This teacher had not been part of the development effort nor had this teacher attended VOICE training.
  - Other teachers replied that they are using VOICE as a complement to, rather than replacement for, traditional texts. In content areas where VOICE is lacking, such as the Revolutionary War, it is entirely appropriate to use other texts.
- March 7, 1997
  - One teacher said the trial of Sarah Good was a big hit. The scripted part of the trial was only a small part of the whole; students role played the rest.
  - One teacher said her kids loved polling. They polled the entire school and are learning to graph the results. She said the poll helped with speaking skills (repetition of questions and clarifying helped those with limited English), math, writing, understanding others' perspectives, and reading.
  - Another teacher had students do Rose's Sporting Goods vs. Kramer in teams, rather than in triads. Staff suggested the students need more help organizing their arguments and that they were somewhat confused about their roles. The teacher said they spent several more days on that activity. Staff suggested that teachers make

sure students get their facts straight on "The Birthday Bash" as it would be easy for them to get off track.

- This teacher had students do a mock trial of Hansl and Gretl. They tried the witch and the parents, and wanted to try the kids.

- June 24, 1997
  - One teacher liked the format of the Sarah Good trial, because it was partially scripted, but gave role descriptions so students could take it from there.
  - Students love having packets. They're not books, and the students own them.

There were also two interviews with administrators on the tapes. One in particular provided some detailed comments about the VOICE program as provided under each of the following questions below.

What do you think about the VOICE program?

- "It's highly interactive with kids."
- "Teachers think it really makes a change in the behavior of the kids."
- "By giving them responsibility, they learn responsibility…is a key thing."
- "Kids (after VOICE) have a buy-in not only to the curriculum but to the school authority structure."

How many will be doing it next year?

- "Originally five, the seven this year minus two who will take different assignments, plus other people in the building that they turned on so we'll probably have ten to eleven. We'll also send out another all call in August, then probably use some drug-free schools funds to do another training in August and hopefully get a few more people involved."

So you actually do a one-day training for new people?

- "We will if there's interest out there."

Who does the training?

- "Somebody at CRF plus teachers who've been involved from the beginning. We'll also send some of them to the Illinois State Conference and they'll do the training component there."

Are the principals involved? How much do they know about this? How much is it supported?

- "They probably know it at a real low level. It doesn't touch them on a day-to-day basis. They've gotten the facts from Central (Administration) about the meeting."[2]
- "The program in general has had real good support."

Conclusions

Among the conclusions that can be drawn from the qualitative evaluation are the following.

- Student focus groups proved to be a positive learning experience as well as an effective method of evaluation. The summary of focus group responses indicated that:

  93.4 percent of students are now more aware of their rights.

  93.2 percent have a better understanding of how to solve problems for themselves.

  92.1 percent have a better understanding of the reason for rules and laws.

  86.6 percent learned a lot about government, law, and history.

  A similar percentage of students had a better understanding of how to help others solve problems.

  84.6 percent learned other ways to solve problems than by fighting or using violence.

  A similar percentage gained a better understanding of their responsibility for their own actions.

  83.3 percent learned to respect the opinion of others.

  80.1 percent valued working in small groups because more information was shared.

  Slightly over half used mediation and negotiation skills with their friends.

  Slightly less than a third indicated their use of mediation and negotiation skills at home.

  (With respect to the last two findings, the interviews suggested that children did, in fact, attempt to use their mediation and

2. Staff indicated that at least one of the principals understood the VOICE program very well.

negotiation skills at home and with friends, even though the process was not always successful.)

- Another important result of the qualitative analysis is an understanding of how children reacted to both the content of the lessons delivered as well as the form of delivery of the VOICE program. The students remembered most vividly and accurately those lessons they captured through readily understandable and visible "hooks" as in the names of the programs presented, like "Little Red Riding Hood" and "Sacred Blade."
- The lessons that seem to best stick with students also often have a clear cognitive lesson as well as a behavioral or action component and allow the student to exercise, or potentially exercise, some control of his or her environment. By example, the mediation lessons met all of these conditions and were frequently cited by students as one of their best experiences in the VOICE program.
- Another aspect of both content and form of delivery that students use to judge the success of a lesson is whether it is "boring," i.e., whether a lesson comes across like most school lessons or not. Boredom is reduced or eliminated when lessons are given in a way that reduces the constancy and changes the routine. Students, for the most part, are clear and reasonable about what is boring and what is not, how it can be alleviated, and when it should be accepted as a part of being a student or teacher.
- Review of the audiotapes reveals an important distinction between academic and real-life lessons and raises issues about the transfer of academic lessons to real-life applications.

Quantitative Evaluation Methodology

Pre- and posttest instruments were administered to classes of fifth-grade students both in Chicago and Elgin, Illinois. The students who completed the pre- and posttests were in either experimental classrooms (four in Chicago and seven in Elgin who received the VOICE program) or control classrooms (three in Chicago and four in Elgin who did not receive the VOICE program). As is virtually always the case in such research and demonstration efforts, three teachers could not complete the evaluation; two experimental and one control classrooms dropped out without completing the curriculum and posttests. Nevertheless, a sufficient number of students (N=140, with some variation from question to question) completed both the pre- and posttests in both experimental and control classrooms to warrant quantitative analysis of the resulting data.

The pre- and posttests were designed with four sets of student outcomes in mind: knowledge, skills, attitudes, and behaviors. These pre- and posttests, comprising 87 separate items in two instruments, were administered in two phases: the first focusing on student knowledge and skills; the second on student attitudes and behaviors. The knowledge/skills test consisted of 24 items in a variety of formats (e.g., matching, true-false, and multiple choice items), while the attitude and behavior test consisted of 63 items, most in the form of Likert scales. Open-ended items asking students to respond to hypothetical problem situations were also included in the attitude-behavior instrument. These results are not reported here.

All the pre- and posttests returned to SSEC by program staff and participating teachers were coded and entered into a Statistical Package for the Social Sciences (SPSS) database. More than 600 completed tests were eventually coded and entered into the database. Subsequent analysis showed, however, that a fairly large number of tests had to be discarded, largely because pretests could not be matched with posttests. Because of the nature of the experiment and resulting data, the evaluators chose to use a matching sample T-test procedure as the statistic of choice. The matching sample T-test essentially compares the means of a data item or variable (say, a knowledge question) for two matched groups at time one (pretest) and at time two (posttest). A confidence level of 95 percent was used as the measure of statistical significance for the compared differences in means.

Knowledge and Skills: Discussion of Results

On only four items did no significant change occur between the pre- and posttest for any group, either experimental or control, in either Chicago or Elgin. These items included the following.

- Item 3, "The president cannot be over 60 years old."

- Item 7, "Hiring a lawyer is the only recourse in some situations.
- Item 10, "The Supreme Court interprets the law."
- Item 16, "The Bill of Rights says Congress cannot make a law to..."

On only two items did the change that took place run in an undesirable direction. In both these cases, only one group showed an undesirable and statistically significant change.

- On the first of these, Item 9, "Students have the right to say anything in school," the mean scores of one experimental class declined; however, the pretest mean score was very high and so a "ceiling effect" may, in fact, explain the decline.
- The mean score for one control class declined for Item 17, the results of reading a poll and adducing its meaning.

On nine knowledge and skill items the increases in mean scores exclusively favored the experimental groups. In addition, on each of these items, all experimental group scores increased at a statistically significant level. These items were as follows.

- Item 1, concerning the election of the U.S. President.
- Item 2, concerning the re-election of the president.
- Item 4, President must be a natural born citizen.
- Item 5, President must have a college degree (in this case, the Elgin and overall control group scores actually declined).
- Item 6, President appoints local police leaders.
- Item 13, concerning why Illinois has more U.S. Representatives than another state.
- Item 14, concerning how a bill becomes a law.
- Item 18, concerning the right of state militia to bear arms.
- Item 22, concerning the right to equal protection of law.

It is important to point out that on 40 percent of the pre/posttest items, the mean scores of the experimental groups improved at a statistically significant level while the mean scores of the control groups did not improve at such a level; in one case, the mean scores of control groups actually declined.

On ten knowledge and skill items, both experimental and control groups' mean scores increased. These items are as follow.

- Item 8, concerning the right to an attorney (Chicago and overall experimental groups and overall control group).
- Item 11: President can fire a Supreme Court justice (overall experimental and overall control groups).
- Item 12, Supreme Court justice has longer term (all experimental groups and Chicago control group).
- Item 15, local law-makers have the power to . . . (all experimental groups and the overall control group).
- Item 19, concerning the right to freedom of speech (all experimental groups and the Elgin control group).
- Item 20, concerning the right to freedom of the press (all experimental groups and the Elgin control group).
- Item 21, concerning the right to protection from self-incrimination (all groups except the Chicago control group).
- Item 23, concerning the right to peacefully assemble (all experimental groups and the Chicago control group).
- Item 24, overall test mean score (all groups).
- Item 25, overall score—percent of questions correct (all groups).

Although both experimental and control groups' mean scores increased in a desirable direction at a statistically significant level on all the items above, in every case except one (Item 11), the extent of change favors the experimental groups. Thus, on an additional 44 percent of the test items, desirable change in mean scores also favors the experimental groups.

Conclusions Regarding Knowledge and Skills

Based on the analysis of the knowledge and skills test data, the following generalizations seem defensible:

- On no knowledge and skill items did statistically significant increases in mean scores unambiguously favor the control groups in either Chicago or Elgin.
- The extent of changes in mean scores unambiguously favors all experimental groups compared to the control groups.
- The control groups' scores also showed desirable change in a number of instances at a statistically significant level. This fact suggests that the knowledge and skill test is at least moderately well-tailored to the fifth-grade curriculum, into which the VOICE program is infused.
- The above three findings are further reinforced by Iowa Test of Basic Skills scores, which showed substantial improvement by the experimental classrooms in the four Chicago Public Schools as compared to the control schools. This data was reported by the principals and is available on the Chicago Public Schools web site.
- Although there were statistically significant changes in a desirable direction for the items dealing with individual rights and the Bill of Rights, the relatively low pretest scores on virtually all of these items (compared to others on the test) suggests that particular attention should be paid to such concepts during instruction.
- It should be noted that the qualitative study indicates that 97.4 percent of the students in experimental classrooms became more aware of their rights and were able to intelligently discuss issues surrounding rights, even several months after they had experienced the curriculum.
- The upshot of the foregoing discussion is that the VOICE program appears to have had a significant impact on students' knowledge and skills over and above what might have been expected from experiencing the standard curriculum.

Attitude Variables: Discussion of Results

Only two items from the attitude variables showed significant change in an undesirable direction. One disfavored an experimental group, the other disfavored a control group:

- Item 10, "I add my ideas to group discussions" (the Chicago experimental group scores and overall experimental group scores declined).
- Item 1, "Most past social studies classes were boring and useless" (Chicago control group).

Given the design of instruction in the VOICE program (namely, interactive instructional strategies and an emphasis on student discussion), the first item may be a source of concern, at least in terms of the Chicago experimental group.

Eight variables on the attitude portion of the test showed significant positive change for experimental student groups.

- Item 2, "It's important to get to know teachers because they can help you" (Chicago experimental group).
- Item 3, "When friends have problems, I try to help them" (Chicago experimental group).
- Item 7, "Most social studies teachers are interested in me" (all experimental groups).
- Item 16, "When other kids speak in class, they add something worthwhile to the discussion" (Elgin experimental group).
- Item 20, "School is a waste of time" (Chicago experimental group).
- Item 22, "Things I learn in class are really helpful to me" (Chicago experimental group).
- Item 26, "Some days I would rather not go to school" (Overall experimental group).
- Item 27, "My social studies teacher makes learning fun" (Elgin experimental groups).

Although it must be said that the above positive changes in mean scores did not favor all experimental groups equally, the items on which positive change took place concern student attitudes toward school, teachers, and other students. Changes in such scores would seem to be fundamental to a curriculum and instructional package such as VOICE, which self-consciously emphasizes learning strategies that

foster active student work. In theory, such strategies should positively affect student attitudes on such variables as those above.

Eight items showed statistically significant change in a desirable direction for control groups:

- Item 4, "I get along with most kids in my class" (Elgin control).
- Item 5, "Most of the time I don't like to work in groups with other students" (Elgin control).
- Item 9, "My teachers go out of their way to help me" (overall control group).
- Item 10, "I add my ideas to group discussions" (Chicago control).
- Item 11, "I think of myself as a good listener" (Elgin control).
- Item 16, "When other kids speak in class, they add something worthwhile to the discussion" (Chicago control).
- Item 17, "When I speak in class, people listen to me" (Overall control group).
- Item 26, "Some days I would rather not go to school" (All control groups).

One set of items should be noted. It appears that several of the desirable changes noted above concern students engaged in small group work. This is, of course, one of the active learning strategies touted by law-related education generally and the VOICE program in particular. The positive changes in student mean scores relating to variables that deal with students working in small groups tend to favor the control groups. Since training teachers for using small group work appropriately is generally difficult, we might suggest particular attention be paid to this dimension in any subsequent VOICE training.

Several items showed no statistically significant change for any student group. For purposes of analysis, we have grouped these items in the following categories: variables that related to the school generally (i.e., beyond specific classrooms); variables that relate to specific classrooms; and variables that relate to the community generally.

General School Variables

- Item 6, "I really don't feel involved in my school."
- Item 8, "If there's something I don't like about my school, I work hard to change it."
- Item 12, "I take responsibility to finish tasks on time. . ."
- Item 13, "If I work together with other students, we can improve our school."
- Item 21, "I try to do well in school."
- Item 24, "I try to come to school prepared."
- Item 30, "I try to solve my own problems in school."

Classroom Variables

- Item 14, "I try to be patient with other students."
- Item 15, "I respect the opinions of others in my class."
- Item 18, "Most of the time, I don't feel comfortable working in a group in my class."
- Item 19, "Rules in my class apply the same to all."
- Item 23, "It's easier to get things done by working in a group instead of alone."
- Item 25, "My social studies teacher tries to get me interested and involved in my classes."
- Item 29, "Working in groups will help me learn more."

General Community Variables

- Item 28, "It is important for people like me to work together to make our community safer."

In trying to interpret why the above variables appeared to be resistant to positive change, we can only speculate. In the first and third categories, it may be that students have some difficulty in transferring positive attitude changes that are apparent at the classroom level to the school and community more broadly. For example, to feel more empowered in one's own classroom context may not easily or quickly transfer to the broader contexts of school and community. Moreover, it may take quite direct experience—over an extended period of time—in these larger contexts before students' attitudes toward their involvement in those contexts might change. It may therefore be that some of these items are simply asking too much of the students and of

the VOICE program to affect these specific variables, at least in the short run.

The apparent lack of change in the classroom variables noted above seems to run counter to other, similar, classroom variables in which students' attitudes did change positively. It may be that students found tedious the repetition of closely associated items. It may also be that we simply asked students to respond to too many prompts, which may have forced them to answer too rapidly for thoughtful consideration, produced fatigue, or even have led to students being somewhat cavalier in their responses (perhaps even to the point of answering questions randomly).

Conclusions Regarding Attitude Variables

The pre/posttest comparisons indicated that on a variety of measures, the VOICE program has desirable effects on student attitudes. Most of these related to the classroom context of the students. On measures of student attitudes on variables that went beyond the classroom, there was little apparent change either positively or negatively. To a certain extent, this overall outcome should not be surprising, given that attitudes are exceedingly difficult to change. Moreover, it is our educated guess that there were simply too many attitude variables to which students were asked to respond which, in turn, may have influenced the quality of student responses. We therefore suggest, in subsequent evaluations of the VOICE program, that the number of items be limited to those variables that seem most likely to be directly affected by the curriculum and instruction.

It should also be noted that the qualitative study provided additional insights on attitudes, particularly regarding students' positive feelings toward the classroom activities, their teacher, their classmates, and the resource people whom they met.

Behavior Variables: Discussion of Results

In general, the variables that dealt with student behavior and action appear to have been the most resistant to change of any kind. Fifteen items indicated no change; four items indicated positive change for either the experimental or control groups; and seven items indicated changes in an undesirable direction. It should be noted that on the majority of behavior variables the students' reported anti-social (or so-called delinquent) behavior was at a very low level during the pretest and for the majority of variables stayed low. Thus, part of the lack of change is a sort of ceiling effect; that is, many of the behavior variables would be difficult to influence positively because they are already quite positive.

To illustrate, if you get a 100 percent score on a test, it would be impossible to improve the score if the test were taken again. Obviously, the only direction in which change can take place is negative. While not as extreme as this example, many of the behavior items seem to indicate that this general rule is at work, particularly on those items in which no change occurred. In addition, it should also be noted that the method of coding of the test items probably tended to inflate the resulting means.

With this said, what follows is a brief discussion of those behavior items that showed positive change and those that showed adverse change in mean scores.

On only four items from the behavior battery did desirable change occur. Only one of the four favored an experimental group; the other three favored a control group.

- Item 19, "Talked a friend out of doing something you knew was wrong" (favored the Chicago experimental group).

All three of the following favored the Chicago Control group.

- Item 5, "Tagged or put graffiti on property that wasn't yours."
- Item 15, "Hit or kicked an animal because you were mad."
- Item 16, "Helped friends talk out a disagreement."

Seven items showed a change in mean scores in an undesirable direction:

- Item 2, "Hit or shoved other kids" (Chicago and overall experimental groups; overall control group).
- Item 3, "Got into a physical fight with other kids" (Chicago experimental).

- *Item 4, "Gone into somebody's house or garage when you were not supposed to be there" (overall experimental group).
- Item 11, "Picked on kids your own age" (Chicago and overall experimental groups).
- Item 12, "Started a fight" (Chicago experimental group).
- Item 14, "Walked away from a fight without getting involved" (Elgin control group).
- *Item 2 (last battery): "Take something at school without permission" (Chicago and overall experimental group).

Note that an asterick (*) indicates that the pretest means showed a very low incidence of this behavior; thus a potential ceiling effect may be in play. Furthermore, if you remove Item 4 and the last item from the list above, the behavioral variable in each instance is a variation on physical fighting. One might surmise from this observation that attitudes toward physical fighting, given the contexts in which students most often find themselves, are to some degree resistant to change. Moreover, situations that are conducive to fighting may be more difficult for individual students to control, whatever their attitudes might be. It may also be that the VOICE program should investigate ways that this particular phenomenon is more explicitly treated during instruction.

Conclusions Regarding Behavior Variables

The following conclusions can be drawn based on the analysis of behavior variables:

- Most of the items developed to ascertain changes in behavior showed no change. This outcome results at least in part from the fact that participating students already had low scores concerning undesirable behaviors at the start of the program. This may represent a ceiling effect of sorts—reported instances of undesirable behavior are not likely to decline much if they were already low at the beginning of the program.
- In this regard, it must be emphasized that all of the participating schools were in neighborhoods with relatively high levels of violence and gang activity. Thus, environmental risk factors were high for all students. However, the students appeared to be most at risk academically, not behaviorally.
- Most of the variables that showed a change in an undesirable direction were related to physical fighting. These behaviors, it may be argued, are not in the exclusive control of an individual student; at least not without a great deal of practice in avoidance strategies, willingness to deal with the possible opprobrium of significant peers, and perhaps some luck.
- It is important to note that the interviews with the schools' principals indicated that they had fewer problems with discipline and fighting after the implementation of VOICE. When they did have problems, students were more reasonable when subject to disciplinary action.
- The large number of items on the attitude and behavior parts of the pre- and posttest may also have had an adverse effect on student responses.

Conclusions and Recommendations

Program Recommendations

- Offer the VOICE curriculum to other schools across the country. This evaluation has revealed that students pay attention to what they learned in VOICE. Other lessons are that the program has significant potential for future payoffs, the learning process can be enjoyable, the curriculum can be implemented in diverse settings, its lessons can provide students with some power in their lives, they can teach others what they have learned, and they can use its lessons to understand violence in society on a daily basis.
- Tie VOICE lessons into other curricula and programs so that learning is reinforced across different classes and situations. As two students themselves suggested, a VOICE club could be created (their analogy was the 4-H club). Develop additional lessons that show students how the ideas in VOICE are part of a historical process that ties us together as a society. The program was designed to be interdisciplinary and to be used in self-contained classrooms. However, some schools are departmentalized, which may mean involving all of the non-social studies teachers to help them reinforce program objectives.
- If possible, provide more incentives to teachers to keep them positively motivated about the

VOICE program. Included among the possibilities for accomplishing this objective are developing different formats for VOICE, rotating these units in different years or semesters, putting more emphasis on adaptation of the program to day-to-day events, increasing the range of exercises and units over time, varying the types of visitors and the specific individuals who visit the schools, and varying dates and locations of field trips. Encourage teachers to modify, within reason, the units to their own styles.

- Include the experienced teachers in developing and planning future VOICE programs. Involving these teachers in expanding the program and training other teachers in the use of VOICE is not only an effective strategy for future implementation, but is a potentially valuable staff development medium for the experienced teachers as well as the new teachers.

- Improve the outcomes of the program by focusing on what best creates positive and useful skills, attitudes and behaviors, how the lessons should be constructed and delivered, and what the focus should be for the lesson, e.g., in-class behavior or out-of-class behavior. One way to visualize this planning process would be as a matrix with knowledge and skills on the left, attitude, behavior in class and behavior out of class along the top right, and elements like participation and the quality of the message as variable links between the two sides of the matrix. Both quantitative and qualitative issues could be considered through such a matrix planning process.

- In developing or refining lessons for the VOICE program, create lessons that are multifaceted and, therefore, reinforce learning in different ways.

- Prepare lessons so that students are not asked to learn behaviors that will jeopardize them in situations they encounter out of class, and so that they can also learn what to realistically expect when they act in new ways. For example, lessons on how to mediate conflict would be taught along with lessons about where and when to use it and what to expect in different situations.

- Provide more explanations for students to illustrate how conflict and violence build up before they actually occur. In the police unit, for example, the students were taught how and why violence happens, when it can be addressed, and when not to address it and simply walk away. These strategies could also be provided as a part of other units to show students a range of examples of what happens in violent situations and how to use what they learned in VOICE to understand and deal with violence at home, with friends, in the newspapers and magazines, on television, and in the behavior of others in general.

- Because of the students' interest in action, videotaping all students in their various role play exercises should be done as often as possible. These tapes could be used as part of the learning process by letting students watch and critique their own performances. Videotapes of mediation in practice and other approaches to preventing and dealing with violence could also be shown to the classes at critical points.

- The most powerful field trip in the current program—to the Police Training Academy—should be retained in the future. When the VOICE program is implemented in other communities, similar field experiences should be found and included.

Evaluation Recommendations

- Reduce the total number of items covered in the quantitative pre- and posttest evaluation instruments.

- Target the items on the tests more closely to the actual curriculum and the components of the curriculum that focus most accurately on what is different in the VOICE program either as input or outcome.

- Tape (preferably videotape) the focus group sessions to preserve both specific comments and problem-solving approaches to issues that arise as well as to capture the tone of the dialogue and the more detailed comments.

- Hold focus groups with teachers and students more frequently, at least midway during the program as well as at the end. Focus groups held at the beginning would also provide a good view of expectations and pre- and post-program results.

- Improve the qualitative research protocol by some practical steps that include making sure the recording equipment and locations are adequate and providing identifying details for each taping. In many research situations, such de-

tails are easily overlooked, although attention to them can greatly improve the results of the study.

Observations on Merging the Results from Qualitative and Quantitative Analysis

Given the overall emphasis of the VOICE program on teaching knowledge and skills (the concepts, vocabulary, and actions) that lead to positive changes in attitudes and behaviors, consideration of the results and conclusions of both the qualitative and quantitative research suggests the following:

- Merging both types of evaluation research reported here indicates that students did learn about the concepts that the VOICE program deemed important. The program also seems to have influenced the way students think about the world (i.e., out-of-class concerns), although to a lesser extent than for in-class concerns. They also indicate that VOICE did change student behavior in-class to a yet smaller, but still acknowledged, extent (or at least in terms of how they think about their behavior). It would also appear that VOICE had no discernible effects on their out-of-class behavior. However, it is significant that students could focus on their out-of-class behavior and that they would even consider modifying how they act and react. The focus group discussions with students revealed some students' willingness to consider such changes and to experiment, even if only verbally, with what the consequences of new behaviors might be.
- It would appear that the VOICE program faces the same problems one might expect in any situation that tries to change attitudes and behaviors rather than just conveying knowledge. Further, one may reasonably argue that knowledge is the easier of the three to teach and to learn, followed by attitudes and then behaviors. The latter two are undoubtedly more resistant to teaching and learning and therefore take more time and, perhaps, conscious effort to change. Moreover, the learners' ability to transfer the skills learned (i.e., to apply what is learned) to other, apparently dissimilar situations may be difficult without extended opportunities, practice, and conscious encouragement. In any case, it is again important to note that student self-reported attitudes and behaviors were already relatively pro-social at the beginning, despite the environmental risks facing them in their neighborhoods.

Law-Related Education Program for Pregnant and Parenting Teens: Program Evaluation

Introduction and Problem Formulation

The problem of teenage pregnancy is a crisis in the United States. Every year in the United States, 12 percent of all women between the ages of 15 and 19 become pregnant. California leads all 50 states in the rate of teenage birth, with rates 40 percent higher than the rest of the nation, exceeded only by the District of Columbia (California Wellness Foundation, 1996). Teenage pregnancy and teen parenting are linked to a number of social, cultural, economic, legal, and interpersonal problems.

Teen parents are often faced with a myriad of complex issues and social problems. However, the focus of this program, and of this report, is to discuss the unique needs pregnant and parenting teens have for education about the law and legal issues. Since this program was administered by Phi Alpha Delta, a law fraternity, the interventions were limited to the provision of Law-Related Education. Unsuccessful attempts were made in the previous program year to incorporate child development and conflict management into the curriculum. However, since Phi Alpha Delta has a long track record of implementing successful Law-Related Education programs, and has no particular expertise in the areas of child development, psychology and/or counseling, the program was limited to LRE.

Although the LRE program will not specifically address the social and psychological problems inherent in teen pregnancy, it will indirectly have an impact on the quality of their lives. Law-Related Education for Pregnant and Parenting Teens was designed to provide instruction in the laws designed to protect children and the family. Knowledge of these laws, including child abuse laws, visitation, domestic violence laws and restraining orders, statutory rape laws, and emancipation, could improve the interpersonal lives of the teens and prevent conflicts. Often teens are taken advantage of in many of these areas because they do not know their rights or what they can do if they are being victimized. Increased knowledge could prevent inadequate problem-solving skills.

In addition, understanding of laws regarding housing, consumer rights, employment rights, financial benefits and child support all seek to improve the economic condition of teen parents who frequently live below the poverty line. Knowledge of their rights in terms of earning a living, applying for temporary aid, and securing child support for the continued care of their children will make it easier for teen parents to provide a financially secure home for their babies.

Teen parents are often confused about their legal status—lacking education about many areas of the law and not realizing the full rights of adult citizens. However, they are charged with the responsibility for the care and development of a child. Awareness of their rights and responsibilities as parents, and of the legal system, is hypothesized to empower pregnant and parenting teens to help them develop into mature, responsible citizens, able to care for their children.

Most citizens, particularly teens, view laws and legal issues as a mysterious and confusing list of rules and regulations, difficult to negotiate and understand, except by attorneys and police officers. The fact the law may be intimidating often prevents them from utilizing the legal system when necessary, i.e., when their rights are being violated, when involved in the juvenile justice system, dependency court, fighting for custody or child support or even traffic court. Many teen parents are unaware of their rights and responsibilities as teen parents and this program sought to address those gaps in knowledge and understanding.

An informal needs assessment (a focus group) conducted by Sally Thompson and Carla Glasbrener of the Pregnant Minors Program revealed that teens

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This program was evaluated by Marcia W. Wilson, LCSW, of the Center for the Advancement of Learning at the University of Southern California.

self-reported that they felt they were in a sort of "limbo status"—that they were in many cases outcast from their families, but unable to set up their own households due to perceived age, educational and social restrictions. All 20 of those involved in the needs assessment stated that they needed clarification about the laws related to teen parenting. Topics of interest suggested by the pregnant and parenting teens from the needs assessment included (in no particular order):

- Clarification of laws regarding statutory rape
- Emancipation
- Visitation rights
- Child support
- Restraining orders and domestic violence
- Legal aspects of securing housing
- Accessing financial resources
- Consumer rights
- Employer bias and unfair treatment of teens in the workplace
- Health care
- Parental rights and responsibilities of teen parents

These suggestions were used to formulate the curriculum for the program. The teens in the focus group also expressed a desire for personal consultation or advocacy to answer their specific questions about various legal issues in which they are involved. However, since this was a generalized LRE program and was not designed to give specific legal advice, the attorneys were instructed to refer girls in need of legal advice to a community-based agency that provides this service.

Program Goals

The goals of the Law-Related Education Program for Pregnant and Parenting Teens were as follows:

- To "demystify" the legal system, which is often seen as complex and unmanageable to teens
- To increase the consumption of and awareness of legal services, resources and advice available in the community
- To increase teen parents' awareness of their general rights and responsibilities
- To increase knowledge in areas specific to the curriculum developed

Program Description

The program was administered in Van Nuys, California. Van Nuys was selected based on the need for the program in that area and for practical reasons. Van Nuys is under the jurisdiction of Judge Michael Harwin, who was the program administrator, so the site was convenient for him and the volunteer attorneys who taught the course. The Los Angeles County Office of Education Pregnant Minor Program has a site located at the Northwest Alternative Education Center. Jill Myers, PMP teacher, was instrumental in providing the teens for participation in the program.

Van Nuys has been identified by the California Department of Health Services as an area with a significant teen pregnancy problem. From 1994 vital statistics (the latest statistics compiled by zip code), Van Nuys was reported to have a 66.3 percent birth rate to adolescents less than 20 years old and is considered a "hot spot" (determined by statistical significance of the teen birth rate) in terms of priority for various grants for programs to address the problem of teen pregnancy and parenting (California Department of Health Services, Epidemiology Section, 1996).

The program consisted of 22 one-hour Law-Related Education seminars. Classes were held at the school site on Wednesday and Friday afternoons. Classes began on January 29, 1997, and concluded on April 11, 1997. The classes were taught by volunteer attorneys with particular expertise in the seminar topics. Judge Michael Harwin was the program administrator and was responsible for overseeing the program, recruiting the volunteers and coordinating the evaluation. An evaluator was hired as a private consultant to conduct the program evaluation. Pretests and posttests were administered by her at the school site as well.

The curriculum included seminars on the following topics:

- What to Do at the Hospital: Birth Certificates, Paternity, and Paperwork
- Adoption and Guardianship
- Emancipation
- Housing: Rights and Responsibilities
- Abortion Rights and Family Planning
- Employment
- Government Benefits
- Educational Rights
- Statutory Rape Laws and Issues of Consent
- Child Support and Visitation
- Rights and Responsibilities of Teen Fathers
- Domestic Violence and Restraining Orders
- Immigration
- Dependency System: Child Abuse Laws
- Health Care Systems
- Consumer Rights
- Employment Rights
- Traffic Laws, Cars and Insurance
- Delinquency and Expungement of Records
- Parental Responsibilities and Rights of Teen Parents
- Accessing Government Benefits and Financial Resources
- Community Resources: Legal Aid, Clinics and Help-Lines

Since the program administered in Washington, D.C., the previous year had a significant problem with attendance, the Van Nuys program sought to address this issue by offering the program at the school site, rather than relying on the teens to attend the seminars elsewhere. However, attendance problems are inherent in the population, since pregnant and parenting teens often have doctors' appointments for themselves and/or their babies, transportation problems, sick babies or other things that prevent them from attending school. Also, since some are pregnant, maternity leave absences can interfere with full participation. But, as the program evaluation will illustrate, attendance was actually quite good, and much improved over last year's program. Seminars were videotaped and girls who were not able to be present were asked to view the tapes of the classes they missed. The use of incentives also may have increased the rate of attendance. Gifts for the children (baby bouncers, chairs, diapers, clothing certificates, books, bibs, rattles, etc.) were given at the end of the seminar series.

Program Evaluation

Design

The program evaluation utilized a one-group pretest/posttest design to demonstrate program effectiveness. Although this design cannot rule out external factors that might have caused changes in the target variables, it is appropriate for use in program evaluation at the exploratory level. The pretest was administered during the first program week in January and the posttest was administered one week after the seminars had concluded in April.

Variables

The variables evaluated included: (1) beliefs that legal issues are complicated, (2) attitudes about the law, (3) utilization of the legal system, and (4) knowledge of specific areas of the law related to teen pregnancy and parenting. The posttest also included information about program satisfaction and included open-ended questions for comments from the participants. Demographic variables were also collected including age, grade, ethnicity, pregnancy status and residential information.

Instrumentation

A four-point Likert-type scale was designed for use in this evaluation. The scores could range from 54 to 216, higher numbers indicating less belief that the law is complicated, more positive attitude toward the law, higher utilization of the legal system, and greater knowledge of specific legal issues. The scale was developed with consideration to psychometric principles, age and literacy of the subjects, in consultation with the teacher. A comprehensive search of the standardized tests and measurements was conducted; however, an appropriate measure could not be located. Since the focus was on the acquisition of knowledge and making the legal system seem less complicated, the instrument was centered around this theme. A 55-item scale was constructed to meas-

ure the variables described above. The scale was pre-tested for reliability and reliability analysis was also calculated for the sample used in the study. The alpha coefficients were .81 and .83 respectively, indicating strong internal consistency of the scale. Test/re-test reliability was established with the pilot group. A group of 34 teens were given the scale and it was re-administered in two weeks. The test-retest correlation was .96, indicating strong consistency over time. The scale was divided into four subscales. The variable "belief that legal issues are complicated" was measured by 11 items on the questionnaire. Reliability of this subscale was also adequate (alpha = .79). The variable "attitudes about the law" was measured by seven items on the scale. The variable "utilization of the legal system" was measured by six items on the scale. Due to the small number of items for these two subscales, the reliability was somewhat lower; alpha = .68 and alpha = .59, respectively. The reliability of these subscales may need to be examined in future replication of this evaluation, but they are adequate for the purposes of this pilot evaluation. "Specific knowledge of content areas" was measured using the largest subscale, consisting of 30 items. The reliability of this subscale was very good, alpha = .83. One item was used to verify teacher-reported literacy of the sample and was not included in the analysis. All subjects answered this question in the expected direction, indicating the possession of the minimum literacy skills needed to complete the scale.

Face validity of the instrument was established by obtaining input from attorneys and educators familiar with the law and with the population of teen parents. The pilot test used to establish reliability of the scale was also used to establish concurrent criterion validity by comparing known delinquency records to scale scores. The analysis indicated that the scores correlated moderately (i.e., those students with known delinquent records tended to score lower on the scale), and the correlation was .63, $p = .005$.

The scale was administered by the program evaluator in the classroom. The subjects were guaranteed anonymity and ID numbers only were used on the questionnaires. The teacher had a code sheet which linked the ID numbers to the questionnaires so that pretest and posttest scores could be matched up for analysis. However, the teacher did not have access to the scales. The evaluator explained the four-point scale, which consisted of circling numbers representing opinions from "strongly agree" to "strongly disagree." During the instruction phase, the evaluator used some statements unrelated to what was being measured in order to demonstrate how to respond. The subjects completed the scale in approximately 25-30 minutes, indicating that they were thoughtful and thorough in their responses. The lack of missing data from the scales also indicates careful use of the scale. The posttest was administered in the same setting, with the same instructions, except that they were asked to respond to some open-ended questions at the end of the scale.

Description of the Sample

A total of 35 girls were enrolled in the program at one point in time or another. However, due to missing pretest or posttest data on some of the girls, the descriptive statistics include some missing data. Twenty of the girls completed both a pretest and posttest and these cases were the ones analyzed in determining the effectiveness of the program. The age of the girls in the sample ranged from 15 to 18 years old; the mean was 15.75 years old with standard deviation of 3.18. Most of the girls (31%) were in the 11^{th} grade, 22.9 percent were in the 9^{th} grade, 20.7 percent in the 10^{th} grade, and only one participant was a senior. The majority of these students were Latino, two were white, and one was Asian. Forty-two point nine percent of the girls were parenting teens and brought their children with them to school, and 34.3 percent were currently pregnant during the program period. Only two girls delivered babies during the program period; one of them is included in the analysis. An equal number of girls lived with their parent or parents as did those who lived with the baby's father (31.4%), and 14.3 percent of them lived with the baby's father's family.

As stated earlier, the attendance for this program was quite good; 44 percent of the 35 students attended 16 sessions or more and only 7.4 percent attended less than six. The mean number of sessions attended was 14 with a standard deviation of 4. As mentioned earlier, attendance is a problem with this population, even in the school setting, so these results are quite promising.

Results

The researchers used both parametric and non-parametric tests to test the results of the program evaluation. Since there is some controversy over the use of parametric statistics, particularly with small samples, both types were used to analyze the data. The Wilcoxin-Signed Ranks test is used as the most appropriate alternative to a t-test for dependent samples when the sample size is small and one cannot assume normality. The results of the Wilcoxin-Signed Ranks test indicated that there was significant difference between pre- and posttest scores on the instrument; $Z = -3.63$, $p = .003$, indicating that the results are significant and it is highly unlikely that the differences could have occurred by chance. The Sign-test also found a significant difference between pre-and posttest for the scale, $p = .0004$.

Most statisticians use n> or = 20 when deciding whether it is appropriate to use a t-test for paired samples to analyze data. Since there are exactly 20 paired cases, the t-test can be safely utilized. The t-test is a more robust statistic and has stronger power to detect differences. The t-test results also indicate significant results, $T = 5.83$, $df = 19$ and $p = .000$.

The results above indicate that there was significant difference between how the subjects answered the questions at pretest and at posttest. It is logical to assume that these changes were a result of the Law-Related Education program administered by Phi Alpha Delta Public Service Center.

The subscales were also analyzed to examine the changes in the specific variables. The results were mixed. The differences between the pretest and posttest scores for the subscale measuring "utilization of the law" were not significant, $T = -1.42$, $p = .172$. However, this is not surprising because utilization was not expected to increase immediately. It was planned that a six-month follow-up with this population might more accurately assess whether or not the program increased actual utilization of the legal system.

The subscale measuring "attitude toward the law" was also not significantly different between pre- and posttest. Upon examination of this variable, this result is explained by the fact that the teens did not begin at pretest with a negative attitude toward the law. In general, they had positive attitudes toward abiding by the law and respect for the law; therefore, changes would not be likely.

The subscales for "confusion about the law" and "specific knowledge about the law" were both significantly different at posttest. For the "confusion" variable, $T = -2.78$, $p = .012$; and for the "specific knowledge variable," $T = 33.91$, $p = .001$. These results indicate that these variables were most affected by the program. These results suggest that future programs focus on these two areas.

Qualitative Results

The participants were asked to share with the researcher what they liked most and least about the program and to offer any suggestions for future programs. Here are some excerpts of their comments. (Reproduced as they appeared.)

- "I appreciate the fact the attorneys were able the law more understandable and easier for me, being a young person."
- "I wish there was more time to ask questions because that was my favorite time."
- "I enjoyed the program and I feel like it made many of not be afraid of the law anymore and let us use it to our advantage and not let it take advantage of us."
- "I actually went down and got restraining order on my baby's father's family based on what I Learned here. I thought I just to take all their crap."
- "I learned many new things. I didn't like the camera and I think it made people nervous to ask questions."
- "I like everything; especially like how everybody got involved."
- "I like the lawyers because they treated us like people."
- "I really understand more about the laws than I did before. I thought I knew stuff but I actually didn't."
- "Don't change a thing! I really liked all the topics. I would like to have more time to talk about stuff."

- "I did not know much about the law and was very ignorant of my rights and now I am less ignorant."
- "I would like to have more handouts, charts and diagrams that I could take with me because although the classes were good, I sometimes forget the stuff."
- "I have already started to use the stuff I Learned because my baby's father does not want to claim my baby or pay for him and now I know what I can do and where I can go to get help with it."

Participants were also asked to list the topics that interested them the most. Although almost all subjects were mentioned at least once, the most frequently reported answers were:

- statutory rape
- medical benefits
- child support
- emancipation
- child abuse
- restraining orders

Summary

Overall, this program was a success. From the viewpoint of an objective evaluator, the results are clear that the Law-Related Education Program for Pregnant and Parenting Teens was successful at meeting the goals established by the program. The program participants stated their satisfaction and the empirical data supported their subjective opinions about how helpful the program was to them.

Teen Parents and the Law (TPAL) Program Outcome Evaluation Report

More than 1,400 babies are born to teenage mothers every day in the United States. Teen parents face tremendous challenges including the feminization of poverty, a culture of violence, dysfunctional families, and the lack of living wage jobs and affordable, safe child care. Street Law, Inc. established the Teen Parents and the Law (TPAL) program in 1996 to provide critical legal information and help teen parents develop the skills necessary to deal with the risks they face. TPAL is part of the Youth for Justice program, funded by the Department of Justice's Office of Juvenile Justice and Delinquency Prevention (OJJDP). Street Law's work with TPAL in the DC area is one of several research and development projects undertaken by Youth for Justice in the past three years. These projects have been designed to test the impact of law-related education on high risk groups of young people.

This evaluation report provides an overview of the TPAL program, describes in detail the program design and implementation, outlines the purpose and methodology of the outcome evaluation, and finally, presents the results of the initial outcome evaluation of the TPAL program. The evaluation indicates that the TPAL program equips teen parents with the skills and knowledge to address the substantial risks they face, including risks associated with violence in the family and community. Specifically, participation in the TPAL program had positive short-term impacts on teenage parents' knowledge of important legal and social issues, resiliency skills, including their ability to solve problems, and their capacity to use community resources to meet their needs.

1. Overview of Teen Parents and the Law

The Teen Parents and the Law (TPAL) program is a curriculum of 23 lessons designed to help participants strengthen families and lessen the likelihood of violence in the home and community. Ultimately, as a result, it is expected that the participants will be less likely to abuse their children and perpetuate the cycle of violence. To that end, as an immediate outcome, program participants will be better able to:

- Develop a better understanding of the law and legal practices pertaining to families
- Improve communication, problem solving, cooperation, and empathy (i.e., resiliency skills)
- Improve family management (e.g., recognize non-abusive methods of child discipline)
- Identify appropriate community resources to meet their needs.

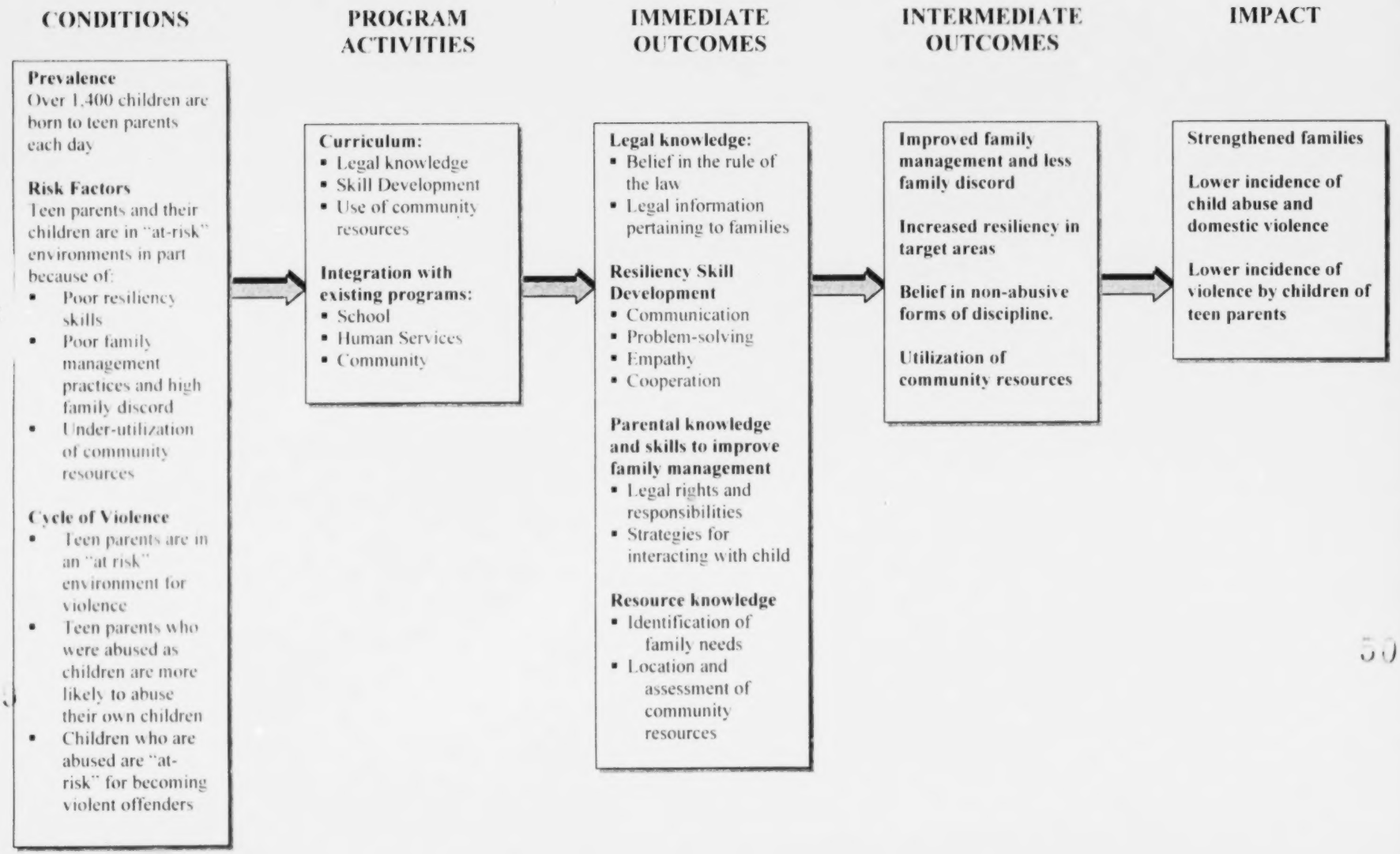
As a result of developing knowledge and skills in these areas, teen parents who participate in the program are expected to demonstrate intermediate outcomes of improved family management skills and less family discord, increased resiliency in target areas, a belief in non-abusive forms of discipline, and increased utilization of community resources. The expected long term results of the program are to strengthen families and help break the cycle of family violence. Figure 1 presents a logic model illustrating the program's overall design and expected results. The expected immediate outcomes were supported by the evaluation findings. The following section describes how this design was implemented.

2. Program Design and Implementation

The TPAL program was developed by Street Law, Inc. to complement existing teen parenting programs. For the past year and a half, the TPAL program has been evaluated in six classes in five schools in the Washington, DC, Metropolitan Area. The six classes included both teen parents and pregnant teens. The number of students participating in the evaluation in each class ranged from 4 to 17 teenagers. While 50 submitted consent forms to participate in the evaluation, only 36 teens participated in the final evaluation. Those teens who did not complete the program withdrew from school for personal reasons or were placed on home study. Teachers participating in the evaluation were instructed to teach at least 25 hours of the TPAL

This program was evaluated by Heather J. Clawson and Stephanie Sheldon of Caliber Associates, Fairfax, Virginia.

FIGURE 1:
Teen Parents and The Law (TPAL) Logic Model


CONDITIONS
PROGRAM ACTIVITIES
IMMEDIATE OUTCOMES
INTERMEDIATE OUTCOMES
IMPACT
Prevalence
Over 1,400 children are born to teen parents each day
Risk Factors
Teen parents and their children are in "at-risk" environments in part because of:
Poor resiliency skills
Poor family management practices and high family discord
Under-utilization of community resources
Cycle of Violence
Teen parents are in an "at risk" environment for violence
Teen parents who were abused as children are more likely to abuse their own children
Children who are abused are "at-risk" for becoming violent offenders
Curriculum:
Legal knowledge
Skill Development
Use of community resources
Integration with existing programs:
School
Human Services
Community
Legal knowledge:
Belief in the rule of the law
Legal information pertaining to families
Resiliency Skill Development
Communication
Problem-solving
Empathy
Cooperation
Parental knowledge and skills to improve family management
Legal rights and responsibilities
Strategies for interacting with child
Resource knowledge
Identification of family needs
Location and assessment of community resources
Improved family management and less family discord
Increased resiliency in target areas
Belief in non-abusive forms of discipline.
Utilization of community resources
Strengthened families
Lower incidence of child abuse and domestic violence
Lower incidence of violence by children of teen parents

curriculum over a period of at least 8 weeks.[1] Attendance rates for participants during the evaluation period ranged from 76% to 85%, which suggests that most participants received sufficient exposure to the curriculum.[2] It is important to note that only one of the classes received all of the lessons and one class received approximately twenty hours of instruction. However, it would be too labor intensive for the purpose of this evaluation to determine the impact this may have had on participants' scores.

The TPAL evaluation team included the Deputy Director of Street Law, Inc., the TPAL Program Director, one consultant, one administrative assistant, one school system Program Administrator, five teachers, and two teaching assistants. In addition, each class was assigned an attorney (TPAL Pal) to assist with the lessons. The Program Director was responsible for developing program curriculum, training teachers on Law Related Education (LRE), recruiting local attorneys to assist with each class, maintaining participant records, and providing technical assistance throughout the year including on-site visits. The consultant assisted with record keeping and scoring instruments.

The TPAL curriculum is comprised of 23 lessons appropriate for low-level readers. It includes lessons on the specific laws that impact families and children, information on community resources, and opportunities for resiliency skill development in areas such as problem-solving and conflict management. Each lesson uses law-related education's interactive strategies, including role-playing activities, simulation, problem-solving, and analysis of case dilemmas to develop participants' critical thinking and interpersonal skills, as well as knowledge. The student materials are available in English and Spanish, and are designed for teachers and non-teachers. Beyond the attorneys who also serve as TPAL pals, teachers are encouraged to use additional resource persons, such as police officers, social workers, and guidance counselors to complement the lessons. The TPAL program can stand-alone or be integrated into existing teen parent programs in schools or community-based settings.

3. Purpose of the Outcome Evaluation

The evaluation of TPAL was designed to assess the program's effectiveness by comparing participants' legal knowledge pertaining to families, resiliency skills, and understanding of community resources before and after program participation. Research has shown that there are a number of risk factors associated with adolescent problem behavior. Equally important is the evidence that certain protective factors can help teen parents from developing these problems. By reducing risks while enhancing protective factors we can prevent problems and promote healthy, pro-social development in teen parents.[3] In this context, program participants face a number of risk factors associated with being a teen parent including an "at-risk" environment for violence.

The development of protective factors such as problem solving skills increases teen parents' resiliency to risk factors by increasing the range of behavioral options teens can access and implement when problems arise. Over time, as teen parents are able to utilize their newly developed skills, they become more efficient at handling their problems, decreasing the probability that they will rely on other, less efficient, means of problem management, such as violence or drugs. As a result, we can expect that by enhancing protective factors, like problem solving skills, we would see a change in areas of risk, including family violence and family management problems.

In addition, research suggests that teen parents engage in negative behavior because they are isolated from social structures, such as the legal system, and other community resources. Being able to identify community resources provides teen parents access to additional support and learning about the laws ties teen parents into society on a broader level. With an understanding of the processes involved with creating laws, teen parents can improve their

1. For implementation purpose, program adapters are encouraged to select from a menu of 23 lessons to tailor the program to the needs of their teen parents.

2. Attendance records were not available from one class.

3. Hawkins and Catalano. *Communities that Care: Action for Drug Abuse Prevention.* San Francisco: Jossey-Bass Publisher, 1992.

own family management practices, such as identifying options and developing rules for their own families. The evaluation addresses the following questions:

- Did teen parents develop a better understanding of the law and legal practices, especially those pertaining to families after participating in the *Teen Parents and the Law* program?
- Did teen parents develop stronger resiliency skills (i.e., communicate, solve problems, empathize, and cooperate) after participating in the *Teen Parents and the Law* program?
- Were teen parents able to identify improved family management practices, such as non-abusive methods of discipline after participating in the *Teen Parents and the Law* program?
- Did teen parents identify and utilize community resources more after participating in the *Teen Parents and the Law* program?

Table 1 presents these questions, their associated outcome measures or indicators, and the data sources for each of the outcome indicators. The data collection instruments listed in the data source column are discussed in the next section and are available from Caliber Associates and Street Law, Inc.

4. Evaluation Methodology

This section presents detailed information on the methodology used to conduct the TPAL outcome evaluation. The first subsection describes the instruments and methodology used to collect the evaluation data. The second subsection presents a description of the techniques used to analyze the evaluation data.

4.1 Data Collection

Evaluation data were collected using survey instruments developed for the TPAL program by Caliber Associates and TPAL staff. These instruments include:

- **Knowledge Assessment Survey**[4]—This instrument was completed by participants to measure knowledge directly related to course content. Areas surveyed include knowledge regarding laws and the legal system relevant to teenage parents, rights and responsibilities of parents, and real life problems and solutions.
- **Skills Rubric**—This instrument was used to document teachers' perceptions of participants' problem solving skills. The skills assessed by this instrument include: accurately identifies the problem, communicates, generates options and/or alternatives, evaluates consequences for each option, and reaches agreement and selects solutions.
- **Community Resources Questionnaire Parts I-III**—This instrument was designed to measure participants' current use of community resources (e.g., Child Protective Services, Head Start, Department of Housing, and Temporary Assistance for Needy Families) and to assess their future willingness to seek assistance for problems.

The surveys were administered to teen parents prior to participation in the program and upon completion of a minimum of 25 hours of lessons.[5] Teachers and teacher aides were responsible for administering participant data collection instruments.[6]

At Caliber, incoming data were checked for consistency and accuracy. When inconsistencies and missing data were detected, a member of Caliber's project staff contacted the program staff to clarify and resolve the issue. Once data were collected, entered, and cleaned they were ready for the analyses described in the next section.

4.2 Data Analysis

Before beginning the analyses, outcome measures were created from the data collection instruments described above. These outcome measures include:

4. The disparities in the literacy abilities of teen parent participants could impact the degree of achievement on the instrument for some participants.

5. One class only received approximately 20 hours of instruction.

6. Street Law, Inc. staff were not responsible for administering the data collection instruments, therefore some inconsistencies may have occurred.

TABLE 1:
Outcome Indicators for TPAL Program Goals

RESEARCH QUESTIONS	OUTCOME INDICATORS	DATA SOURCE
Did teen parents develop a better understanding of the law and legal practices?	Teen parents will express belief in the rule of the law.	Knowledge Assessment Survey (Q 1) Knowledge Assessment Survey (Q 4) Knowledge Assessment Survey (Q 29 a-g) Knowledge Assessment Survey (Q 40 a-f)
	Teen parents will demonstrate a better understanding of the legal information pertaining to families.	Knowledge Assessment Survey (Q 3) Knowledge Assessment Survey (Q 5) Knowledge Assessment Survey (Q 6) Knowledge Assessment Survey (Q 9) Knowledge Assessment Survey (Q 11) Knowledge Assessment Survey (Q 12) Knowledge Assessment Survey (Q 17) Knowledge Assessment Survey (Q 18) Knowledge Assessment Survey (Q 23) Knowledge Assessment Survey (Q 26) Knowledge Assessment Survey (Q 34 a-g) Knowledge Assessment Survey (Q 35 a-g) Knowledge Assessment Survey (Q 36 a-g) Knowledge Assessment Survey (Q 38 a-e) Knowledge Assessment Survey (Q 39 a-e) Knowledge Assessment Survey (Q 41 a-e) Knowledge Assessment Survey (Q 49)
	Teen parents will demonstrate a better understanding of the legal rights and responsibilities of parents.	Knowledge Assessment Survey (Q 2) Knowledge Assessment Survey (Q 7) Knowledge Assessment Survey (Q 8) Knowledge Assessment Survey (Q 10) Knowledge Assessment Survey (Q 13) Knowledge Assessment Survey (Q 14) Knowledge Assessment Survey (Q 15) Knowledge Assessment Survey (Q 16) Knowledge Assessment Survey (Q 22) Knowledge Assessment Survey (Q 28) Knowledge Assessment Survey (Q 31 a-f) Knowledge Assessment Survey (Q 32 a-g) Knowledge Assessment Survey (Q 47)
Did teen parents develop stronger resiliency skills?	Teen parents will demonstrate improved problem solving skills, communication skills, empathy skills, and cooperation skills.	Knowledge Assessment Survey (Q 25) Knowledge Assessment Survey (Q 27) Knowledge Assessment Survey (Q 50) Skills Rubric
Did teen parents demonstrate improved family practices?	Teen parents will demonstrate knowledge of improved family practices, including establishing family rules and acting in the best interest of their child(ren).	Knowledge Assessment Survey (Q 30 a-g) Knowledge Assessment Survey (Q 44) Knowledge Assessment Survey (Q 48)
Did teen parents identify community resources?	Teen parents will be able to identify appropriate resources for solving real life problems and, in the future, will be more willing to use community resources for support.	Knowledge Assessment Survey (Q 24) Knowledge Assessment Survey (Q 33 a-f) Community Resource Questionnaire

- An overall measure of knowledge—Pre- and post-test Knowledge Assessment Surveys were scored by giving the participant one to nine points for each correct answer. A maximum of 157 points was possible.
- Six measures of specific knowledge areas—The Knowledge Assessment Survey contained items that could be organized according to specific knowledge areas. These items were combined to create the following outcome indicators: belief in the rule of the law, understanding of legal information pertaining to families, understanding legal rights and responsibilities of parents, improved resiliency skills, understanding stronger family practices, and ability to identify appropriate community resources for problems.[7]
- Five measures of problem solving skills—Instructors evaluated participants on each of the five problem solving skills (i.e., accurately identifies the problem, communicates, generates options and/or alternatives, evaluates consequences for each option, and reaches agreement and selects solutions). Skills labeled "great" received three points, "good," two points, "needs improvement," one point, if nothing was marked the participant received no points for that activity. A total score for each of the five skills was calculated by adding these points. The low end of each skill score represents an absence of skill or a need for improvement in the skill, whereas the high end of each skill score represents exceptional skills.

Once the outcome indicators were constructed, the participants' early program scores were compared to their post-program scores using crosstabulations and t-tests. These techniques allowed the research staff to determine if changes in participants' scores were statistically significant. The results of these comparisons are summarized in the following section.

5. Evaluation Findings

This section presents key findings regarding the changes in participants' overall knowledge, area-specific knowledge (e.g., a belief in the rule of law, knowledge of strong family management practices, etc.), resiliency skills, and likelihood of using community resources after completing the TPAL program. The analyses also were conducted separately for each class. Tables 5 through 8 at the end of this report present the results of the by-class analyses and item-by-item reports of teen parents' responses.

5.1 Changes in Participants' Overall Knowledge

Pre- and post program Knowledge Assessment Survey data were available for 36 of the 50 program participants that originally completed a pre-program survey.[8] Analysis of these survey data reveal a significant improvement in overall scores from pre-test to post-test. In fact, over one-third (36%) of the participants improved by one or more letter grades[9] from pre- to post-test. In all categories, program participants, on average, improved. The findings indicate substantial improvement in teen parents' knowledge pertaining to laws impacting families.

5.2 Changes in Participants' Specific Knowledge Area Scores

In addition to participants' overall knowledge, specific knowledge areas were assessed for change. These areas included:

- Belief in the rule of the law
- Understanding legal information pertaining to families
- Understanding legal rights and responsibilities of parents
- Demonstration of improved resiliency skills (i.e., problem solving skills, communication skills, empathy skills, and cooperation skills)

7. To create the specific knowledge area indicators, the correct points received for relevant items were summed for each youth and the score was divided by the total possible correct points for the set of items. For example, if a teen parent received a final score of .85 on an indicator, this sould be interpreted as the teen parent getting 85% of the items correct out of 100%.

8. The participants excluded from the analysis due to missing data (14 teen parents) received similar pre-program overall scores on the Knowledge Assessment Survey as the teen parents included in the final analysis.

9. A score below 60% is considered an F, an A is 90% or more correct, a B, 80% to 89% correct, etc.

- Understanding of stronger family practices
- Ability to identify appropriate community resources.

For the purpose of assessing change in these areas, each group of questions was treated as a sub-test covering a specific knowledge area. Table 2 presents the percentage of questions answered correctly in each knowledge area for the 36 participants who completed both a pre- and a post-test.[10] For example, if the total possible points for an indicator was 20 and the teen parents received a score of 15 correct points, the percentage correct would equal 75 percent (15 ÷ 20 = .75) for that indicator.

As shown in Table 2, participants showed improvement in their scores for all of the knowledge indicators by the end of the program period. Overall, most participants (44%) improved in two knowledge areas, a belief in the rule of the law and understanding legal rights and responsibilities of parents. The proportion of participants improving in each area is reported because average group scores can be influenced by a few participants with large changes (either increases or decreases). Consequently, the proportion of participants improving may be a better indicator of the extent of positive change among teen parents participating in the program. These findings indicate substantial improvement in teen parents' knowledge skills.

Table 2 also presents the average proportion of questions to which participants answered correctly. On average, participants showed significant improvement in three knowledge areas, understanding legal rights and responsibilities of parents, belief in the rule of the law, and understanding legal information pertaining to families. Improvement was also demonstrated in identifying appropriate community resources for problems. For the other two knowledge areas, improved resiliency skills and understanding of stronger family practices, teen parents began the program with low scores in these areas and showed no significant improvement, on average, by the end

10. The participants excluded from the analysis due to missing data (14 teen parents) received similar pre-program scores on the specific knowledge area indicators as the teen parents included in the final analysis.

TABLE 2
Changes in Participants' Specific Knowledge Area Scores

Outcome Indicator	Number of Questions in Scale	Average Proportion Correct		Percent Improving ≥1 grade[1]
		Pre-Test	Post-Test	
Belief in the rule of the law	15	.80	.85*	44%
Understanding legal information pertaining to families	45	.65	.69*	31%
Understanding legal rights and responsibilities of parents	24	.62	.69*	44%
Demonstrate improved resiliency skills	3	.45	.46	6%
Understanding of stronger family management practices[2]	9	.41	.42	25%
Ability to identify appropriate community resources for problems	7	.90	.94	22%

1. Percent improved by one or more grade level.
2. Two variables measuring this outcome were omitted due to insufficient data.
*Indicates a statistically significant difference at $p \leq .05$ between average scores for this outcome indicator at pre- and post-test.

of the program period. The low beginning scores and lack of significant improvement suggests that the knowledge test was not intended to fully capture these two skills, which may be better measured by the Skills Rubric and Community Resources Assessment Survey, where teen parents did indeed show improvement.

5.3 Changes in Participants' Problem Solving Skills

Changes in participants' problem solving skills (i.e., identifying problems, communicating, generating options, evaluating consequences, and reaching agreement) were assessed using the Skills Rubric. Pre- and post-program scores were available for 24 of the 34 participants that originally received a pre-program skills rating.[11]

The Skills Rubric consisted of three performance categories: great, good, and needs improvement. Each category consisted of several items designed to measure each skill. Points were assigned to items marked in each category (e.g., great = 3 points, good = 2 points, and needs improvement = 1 point). The points for each marked item were then summed to create a score for each skill. For example, the skill "communicates" consisted of ten items, with a range of possible points from 0-30. A great performance is a score between 20-30 points, a good rating is10-20 points and needs improvement is 0-10 points. Participants, on average, moved from the "needs improvement" category to "good" in four skills areas, including: communicates; generates options and/or alternatives; evaluates consequences for each option; and reaches agreement and selects solution(s). Teen parents scored in the "good" category at pre- and post-test in the fifth skill, accurately identifies the problem. However, there was significant improvement in this category from pre- to post-test. It is also important to note that although the average scores were well below the highest possible score, the TPAL curriculum introduced teen parents to new skills which take time to develop. Overall, the majority of students improved from the start of the program period to the end of the program period.

As shown in Table 3, the analysis of these data revealed the following key findings:

- Over two-thirds of the participants improved in four of the five skills
- Participants showed the greatest improvement in their communication skills (75% improving,

11. The teen parents excluded from the analysis due to missing data (10 teen parents) received similar pre-program scores on the Skills Rubric as the teen parents included in the final analysis for four of the five skills. The excluded teen parents were given significantly lower ratings at pre-test for problem identification skills.

TABLE 3:
Changes in Skills Assessments

Skill	Range[1]	Average Score		Proportion Improving[2]
		Pre-Test (N=24)	Post-Test (N=24)	
Accurately identifies the problem	0 to 12	4.58	6.50*	58%
Communicates	0 to 30	7.25	14.67*	75%
Generates options and or alternatives	0 to 18	3.13	7.04*	71%
Evaluates consequences (good and bad) for each option	0 to 12	1.37	4.20*	67%
Reaches agreement and selects solution(s)	0 to 18	3.50	6.46*	67%

1. The high end of the range shown for each skill represents the most favorable score.
2. Represents the proportion or percentage of teen parents improving by one or more points pre- to post-test.
* Indicates a statistically significant difference at $p \leq .05$ between average score for this skill at pre- and post-test.

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with an average increase of 7.4 points) and ability to generate options and/or alternatives (71% improving with an average increase of 3.9 points)

- Participants, on average, showed significant improvement in all five problem solving skills
- The majority of participants improved by at least one point on all skills from the beginning to the end of the program
- Participants moved from the "needs improvement" to the "good category" in four of the five skills areas.

Interviews with teachers support these findings. In fact, teachers report that the Skills Rubric may have underestimated the actual improvement in problem solving skills for all teen parents. Many teen parents who did not demonstrate their problem solving skills during the exercise in which they were being assessed did show mastery of these skills during other activities that took place during the program period.

5.4 Changes in Participants' Willingness to Use Community Resources

Changes in participants' willingness to use community resources were assessed using the Community Resource Survey. Teen parents were asked how likely they would be to use a service if a problem occurred. Assessments were completed at the beginning of the program and at the end of the program period. The results are based on the responses of teen parents completing the survey at both time periods.[12] As shown in Table 4, key findings from these analyses include:

- Participants' willingness to use community resources, on average, improved for all but 1 of the 15 community resource problems, getting married
- Over all, approximately half of all participants reported an increase in their willingness to use community resources if they needed help getting proper nutrition, reporting major problems with their apartment, or obtaining custody of a child, getting food stamps, or stopping domestic violence.

These results suggest that teenage parents' willingness to seek assistance for their problems increased while in the program.

6. Teacher and Participant Feedback

This section presents feedback from teachers and teen parents participating in the program. The teacher results are from a focus group of three teachers and one administrator and telephone interviews conducted with two teachers by Caliber Associates project staff. Participants completed feedback surveys during the post-test period.

6.1 Teacher Feedback

Teacher responses to focus group questions indicate that the TPAL curriculum complements the child development lessons already being offered and presents new material not available from other curriculum. In addition, the user friendly materials, training, and technical support offered by Street Law, Inc., make program implementation relatively easy. Teachers also enjoyed the interactive lessons, role playing, and the support of additional resource people to help implement specific lessons (e.g., police officers assisted with the "Cops on Call" lesson).

During the course of the program, teachers noticed improvements in participants' attitudes and behaviors, legal knowledge and resiliency skills. For example, during one exercise students were asked to choose a participant to act as a lawyer. The teen parents were able to identify and articulate the skills they would like to see in a lawyer, and then reached an agreement about the best person to act as a lawyer. Teachers also reported that most of the participants became more outgoing and confident, and demonstrated stronger listening skills over the course of the program.

From a learning viewpoint, knowledge is often best demonstrated when applied outside of the classroom. One teacher gave an example of a few TPAL participants who were aware of a neighbor abusing his step-children. The participants reported the neighbor to the appropriate authorities, and the situ-

12. The number of teen parents may vary for each community resource due to missing data, either pre- or post-test.

TABLE 4:
Changes in Teen Parents' Willingness to Use Community Resources If They Have a Problem

Community Resource Problem	N[1]	Pre-Test[2] (Average Score)	Post-Test[2] (Average Score)	Percent Improved
Getting emergency food?	30	.70	1.33*	43%
Stopping domestic violence?	29	.86	1.45*	45%
Getting proper nutrition?	29	.93	1.55*	55%
Finding a place to live?	29	.93	1.48*	41%
Getting food stamps?	29	.79	1.34*	45%
Getting child support?	29	1.14	1.59*	38%
Schooling?	27	1.26	1.52	26%
Getting Married?	28	.50	.32	21%
Getting Counseling?	29	.76	1.07	41%
Getting Employment?	29	1.48	1.69	21%
Finding information about child development?	28	1.04	1.32	36%
Stopping child abuse?	29	1.00	1.55*	35%
Dealing with defective merchandise?	28	.57	1.04*	39%
Reporting major problems with your apartment?	29	.79	1.59*	55%
Obtaining custody of a child?	28	.75	1.32*	50%

1. The population size is not constant across each indicator because of missing data.
2. The possible range of score is 0-2, where 0 = not at all, 1 = somewhat, and 2 = very.
* Indicates a statistically significant difference at p≤.05 between average scores for willingness to use at pre and mid course assessment.

ation was resolved. Another teacher noticed improvements in TPAL participants who were asked to participate in a National Youth Summit. The teacher felt the teen parents were better able to analyze situations and develop solutions than they were prior to participating in TPAL. In summary, teachers expressed:

- Enthusiasm about the TPAL curriculum because of the comprehensive materials and first-rate training and technical assistance provided
- An improvement in teen parents' legal knowledge and resiliency skills after participating in the program.

Most importantly, teachers recognized the need for the TPAL curriculum in teen parent and child development classes. As a result, every teacher plans to continue to use the curriculum in the future.

6.2 Participant Feedback

Feedback surveys were completed by 36 teen parents who participated in the TPAL program. Three-fourths (75%) of teen parents rated the TPAL program as the best or one of the best classes they had taken in school. Participants reported that they felt their legal knowledge increased (83%) and problem-solving skills improved (66.7%) during the program period. Seventy-five percent of the participants have used or plan to use the information taught in the TPAL class to help their family. Teen parents particularly enjoyed TPAL's interactive strategies—the role playing activities, utilization of resource people, and unique curriculum. The skills teen parents enjoyed learning include: how to discipline their children, where to find child support resources, and how to utilize legal resources. The majority (80%) of

participants would recommend this class to someone else.

7. Summary

The results of this outcome evaluation suggest that the TPAL program has had positive short-term impacts on teenage parents' knowledge of important legal and social issues relevant to their lives and has impacted program participants' resiliency skills, including using community resources to help meet their needs. While this evaluation did not measure longer term outcomes, it is reasonable to assume, based on short term outcomes, that the program has potential to increase teen parent resiliency skills, strengthen families, and ultimately help break the cycle of family violence. This potential should be tested through further demonstration and evaluation over an extended time frame.

TABLE 5:
Knowledge Assessment Survey
Average Proportion of Correct Responses and Number Improving

Class	N	Pre-Test (% Correct)	Post-Test (% Correct)	Number Improving[1]
1	6	65.2%	65.7%	1
2	6	72.3%	73.7%	1
3.1	5	57.6%	55.9%	2
3.2	5	54.3%	61.1%	2
4	10	66.0%	72.0%	3
5	4	58.8%	71.5%	4
Total	36	62.4%	66.7%	13

1. Number improving represents total number of youth in each class improving from pre- to post-test by one or more letter grade.

TABLE 6:
Knowledge Assessment Survey
Item-by-Item Percentage of Correct Responses

Question	Pre-Test Results for all Program Participants (N=50)	Pre-Test Results for Study Group (N=36)	Post-Test Results for Study Group (N=36)
	Percent Responding Correctly		
1. Laws only affect people who do something wrong.	82.0	80.6	80.6
2. Teen parents do not have the same rights under the law as parents over the age of 18.	46.9	41.7	52.8
3. A child must attend school when she turns five.	84.0	83.3	86.1
4. Community members can help pass laws.	84.0	77.8	88.9
5. The law only defines a family as a husband, wife, and children.	68.0	72.2	77.8
6. A man and a woman may marry whenever they decide to.	50.0	55.6	77.8
7. If a child lives with her father and the mother wants nothing to do with the child, the mother does not have to pay child support.	82.0	86.1	97.2
8. A teen parent does not have to pay child support until she turns 18 years old.	62.0	61.1	63.9
9. A teacher who suspects a teen parent is burning her child must call Child Protective Services.	92.0	88.9	97.2
10. Parents are legally required to immunize their children before the children can attend school.	100.0	100.0	97.2
11. Civil protection orders only help married couples.	88.0	83.3	91.7
12. According to law, advertising must be 100% true.	36.0	38.9	16.7
13. A two-year-old may legally ride in a car if she is wearing a seat belt.	70.0	72.2	77.8
14. If a child lives with his father and not with his mother, then only the father has legal custody of a child.	64.0	72.2	80.6
15. A biological parental always has the legal responsibility for a child.	24.0	22.2	25.0
16. A kinship caregiver can ask for custody of a child not related to her.	74.0	69.4	83.3
17. If a 30 year old has sex with a 14 year old, he is guilty of statutory rape even if he is her boyfriend.	98.0	97.2	88.9
18. Laws do not affect how parents raise their children.	70.0	63.9	75.0
19. The Women, Infants and Children's (WIC) program helps parents provide for the nutritional needs of their children.	100.0	100.0	91.7
20. To apply for child support, a parent should complete the proper forms located at the mayor's office.	58.0	63.9	69.4
21. A parent who leaves a napping baby home alone for three hours is: guilty of neglect.	100.0	100.0	91.7
22. A judge will not order a parent to pay child support if: paternity has not been established.	90.0	88.9	88.9
23. The Education for all Handicapped Children's Act requires schools to: place children with disabilities in their own classes.	76.0	75.0	91.7
24. If a landlord is discriminating against a tenant because of the tenant's race, the tenant should: call a fair housing organization.	90.0	88.9	97.2
25. If a tenant has a broken toilet, he should first: notify the landlord.	98.0	97.2	94.4
26. A landlord must promptly fix all: housing code violations.	56.0	58.3	63.9

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Question	Pre-Test Results for all Program Participants (N=50)	Pre-Test Results for Study Group (N=36)	Post-Test Results for Study Group (N=36)
	Percent Responding Correctly		
27. A consumer letter of complaint should: inform the merchant of the problems with the product.	90.0	91.7	97.2
28. A parent can have his parental rights terminated if he: neither	59.2	63.9	76.5
29. Most laws are designed to:			
a. protect citizens	92.0	88.9	94.4
b. keep the peace	94.0	91.7	86.1
d. regulate safety	86.0	86.1	88.9
f. establish fair procedures	88.0	88.9	86.1
30. A parent may be guilty of neglect if the child does not have:			
a. love	88.0	83.3	88.9
b. food	100.0	100.0	94.1
c. shelter	94.0	91.7	91.7
d. a suitable education	86.0	94.4	91.7
31. The following information is important in order to collect child support:			
a. name and address of absent parent	95.9	97.1	97.2
c. name and address of absent parent's employer	77.6	72.2	80.6
d. tax returns	20.4	8.3	33.3
e. social security number	91.8	86.1	100.0
f. birth certificates of children	83.7*	77.8	94.4
32. A judge determines that a child is being abused by his mother who is addicted to marijuana. The judge may order:			
a. the mother to attend parenting classes	68.0	61.1	80.6
b. the child to be placed in foster care	88.0	86.1	72.2
c. the mother to submit to weekly drug testing	80.0	77.8	91.7
f. a social worker to check in with the child's teacher to make sure everything is going okay	74.0	63.9	75.0
33. To help prepare a three-year-old for school, a parent can:			
a. enroll her in Head Start	98.0	100.0	97.2
c. visit the local library	84.0	86.1	91.7
d. feed the child healthy foods	54.0	52.8	61.1
34. The Federal Fair Housing Act prohibits landlords from discriminating against potential tenants based on:			
a. religion	92.0	88.9	91.7
b. race	94.0	91.7	94.4
f. disability	82.0	80.6	88.9
g. family with children	67.3*	63.9	77.8
35. A tenant has the following responsibilities:			
a. pay rent on time	95.9	94.4	97.2
b. use the apartment for only legal activities	76.0	77.8	69.4
c. inform the landlord of any special needs if the tenant is disabled	70.0	63.9	69.4
f. stay in the apartment for the term of the lease	74.0	80.6	63.9

Question	Pre-Test Results for all Program Participants (N=50)	Pre-Test Results for Study Group (N=36)	Post-Test Results for Study Group (N=36)
	Percent Responding Correctly		
36. Good advice for a victim of domestic violence is to:			
b. call the police and cooperate	100.0	100.0	94.4
c. file for a civil protection order	82.0	83.3	83.3
e. get counseling	84.0	77.8	88.9
f. move out	60.0	58.3	66.7
37. Things a consumer would do to make a wise purchase include:			
b. decide whether the product is a need or a want	86.0	83.3	88.9
c. compare different brands of a product	88.0	88.9	88.9
e. get the advice of friends and family	58.0	58.3	63.9
38. To decide who gets custody of a child, a judge must consider:			
c. the wishes of the child	78.0	86.1	77.8
e. who is taking care of the child	92.0	94.4	91.7
39. Definitions:[1]			
a. Tenant	88.0	88.9	94.5
b. Legal Custodian	58.0	58.3	61.1
c. Consumer	76.0	77.8	91.7
d. Landlord	82.0	83.3	86.1
e. Kinship Caregiver	64.0	66.7	61.1
40. Fill in the blank:			
a. Rules	74.0	80.6	88.9
b. Laws	74.0	75.0	88.9
c. Emancipation	32.0	36.1	55.6
d. Age of Majority	38.0	41.7	58.3
e. Need	80.0	83.3	88.9
f. Want	80.0	83.3	88.9
41. Fill in the blank:			
a. Paternity	74.0	80.6	94.4
b. Child support	48.0	55.6	61.1
c. Custody	74.0	83.3	83.3
42. This question was omitted due to insufficient data.	NA	NA	NA
43. This question was omitted due to insufficient data.	NA	NA	NA
44. A rule is a set of guidelines that regulates behavior. What rules do you use or plan to use in your family?	35.4	33.3	36.1
45. List three laws that help families and explain how these laws help families.	18.8	19.4	33.3
46. List or name three community resources available for a child who is being abused.	44.2	50.0	72.2

1. For questions 39, 44-50 results indicate a score of fifty-percent or more.

Question	Pre-Test Results for all Program Participants (N=50)	Pre-Test Results for Study Group (N=36)	Post-Test Results for Study Group (N=36)
	Percent Responding Correctly		
47. The Brooks only believe in feeding their children two meals a day. They have four children. Two of them seem healthy; two of the children are slightly underweight.			
List two arguments in support of the parents' decision.	46.0	41.6	69.5
List an argument against the parents' decision.	48.0	48.6	62.5
The Brooks are in court and charged with neglect. You are the judge. Did they neglect their children? Why or why not?	62.5	61.1	58.3
48. Theresa and Dick are divorcing. Both want custody of their eight year old son. As a judge, you must decide what is in the "best interests of the child." List three things that a parent should do that are in the best interest of the child.	50.0	47.2	58.3
49. City council is deciding whether to pass the following law: Teen parents must live with their parents.			
List two arguments in support of the law.	56.9	54.2	61.2
List two arguments against the law.	62.8	58.4	66.7
50. You're a tenant. The ceiling of your apartment is leaking and you think you saw a mouse. What should you do?	40.0	38.9	44.4

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TABLE 7:

Skills Assessment Survey
Average Scores and Number Improving By Class[1]

School	N	Accurately Identifies the Problem (Range 0 – 12)[2]			Communicates (Range 0 – 30)[2]			Generates Options and/or Alternatives (Range 0 – 18)[2]			Evaluates Consequences (good and bad) for Each Option (Range 0 – 12)[2]			Reaches an Agreement and Selects Solution(s) (Range 0 – 18)[2]		
		Pre-Test	Post-Test	# Improving	Pre-Test	Post-Test	# Improving	Pre-Test	Post-Test	# Improving	Pre-Test	Post-Test	# Improving	Pre-Test	Post-Test	# Improving
1	8	5.25	9.38	75.0	9.13	20.13	75.0	4.13	11.88	87.5	2.25	8.25	87.5	6.38	10.0	62.5
2	6	4.00	6.16	83.3	6.33	11.83	83.3	2.67	6.0	75.0	1.33	2.50	83.3	2.33	5.83	83.3
3	3	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
4	7	4.86	3.57	0.0	8.14	11.0	57.1	3.57	2.28	14.3	1.00	.57	14.3	2.0	1.29	42.9
5	3	3.33	6.33	100.0	2.0	14.3	100.0	.33	7.33	100.0	0.0	5.33	100.0	1.67	10.33	100.0

1 Number improving represents the total number of youth in each class showing improvement from pre- to post-test in each skill by one or more points.

2 The high end of the range represents the most favorable or positive score.

** The asterisks indicate that there were too few cases in the class to conduct any analysis.

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TABLE 8:
Community Resource Survey I and III
Changes in Teen Parents' Willingness to Use Community Resources If They Have a Problem By Class

Community Resource	Class	N[1]	Pre-Test2 (Average Score)	Post-Test2 (Average Score)	Percent Improved
Getting emergency food?	1	7	.43	1.43*	57%
	2	5	1.40	1.20	20%
	3	5	.80	1.00	20%
	4	9	.00	1.22*	67%
	5	4	1.75	2.00	25%
Stopping domestic violence?	1	7	1.00	1.71*	43%
	2	5	1.20	1.40	40%
	3	4	1.00	1.00	0%
	4	9	.22	1.56*	89%
	5	4	1.50	1.25	0%
Getting proper nutrituion?	1	7	.71	1.71*	86%
	2	5	.80	1.60*	40%
	3	4	1.00	1.50*	50%
	4	9	.44	1.22*	56%
	5	4	1.50	1.75	25%
Finding a place to live?	1	7	.86	1.71*	43%
	2	5	.80	1.20	40%
	3	4	1.75	1.75	0%
	4	9	.44	1.22*	56%
	5	4	1.50	1.75	25%
Getting food stamps?	1	7	.57	1.43*	57%
	2	5	1.00	1.40	40%
	3	4	.75	.75	25%
	4	9	.44	1.22*	56%
	5	4	1.75	1.75	25%
Getting child support?	1	7	1.00	1.86*	71%
	2	5	1.40	1.60	20%
	3	4	1.50	1.50	25%
	4	9	.56	1.33*	44%
	5	4	2.00	1.75	0%
Schooling?	1	7	.86	1.43*	43%
	2	5	1.20	1.20	0%
	3	4	1.25	1.50	25%
	4	7	1.29	1.57	43%
	5	4	2.00	2.00	0%

1. The population size is not constant across each indicator because of missing data.
2. The possible range of the score is 0-2, where 0=not at all, 1=somewhat, and 2=very.

* Indicates a statistically significant difference at $p \leq .05$ between averages for this community resource item

Community Resource	Class	N[1]	Pre-Test[2] (Average Score)	Post-Test[2] (Average Score)	Percent Improved
Getting Married?	1	7	.00	.29	29%
	2	5	1.00	.40	20%
	3	4	.75	.25	0%
	4	8	.13	.25	25%
	5	4	1.25	.50	25%
Getting Counseling?	1	7	.57	1.14*	57%
	2	5	1.00	1.00	40%
	3	4	1.25	.75	0%
	4	9	.33	1.00*	44%
	5	4	1.25	1.50	50%
Getting Employment?	1	7	1.29	1.71	29%
	2	5	1.40	1.20	20%
	3	4	1.75	1.75	0%
	4	9	1.33	1.89*	33%
	5	4	2.00	1.75	0%
Finding information about child development?	1	7	1.00	1.50*	50%
	2	5	1.00	1.00	40%
	3	4	1.00	1.25	25%
	4	9	.67	1.11	44%
	5	4	2.00	2.00	0%
Stopping child abuse?	1	7	.86	1.57*	43%
	2	5	1.20	1.80*	40%
	3	4	1.25	1.25	0%
	4	9	.44	1.33*	56%
	5	4	2.00	2.00	0%
Dealing with defective merchandise?	1	7	.29	1.29*	57%
	2	5	1.20	1.40	40%
	3	3	.67	.67	0%
	4	9	.11	.67*	44%
	5	4	1.25	1.25	25%
Reporting major problems with your apartment?	1	7	.71	1.86*	71%
	2	5	1.20	1.80*	40%
	3	4	1.50	1.50	0%
	4	9	.11	1.22*	78%
	5	4	1.25	1.75*	50%
Obtaining custody of a child?	1	7	.14	1.43*	86%
	2	5	1.20	1.40	40%
	3	3	1.33	1.33	0%
	4	9	.44	1.00*	56%
	5	4	1.50	1.75	25%

B. Research Related to YFJ's Special Initiatives

Over the past decade, the Youth for Justice Program has taken on several special initiatives in which LRE has been implemented in new settings, with new audiences, or for new purposes. One such initiative was the urban initiative, in which an intensive LRE program was undertaken in an urban setting where large numbers of at-risk students could receive LRE instruction. Another initiative involved application of LRE strategies and content to teaching in juvenile justice settings. Other initiatives included major efforts aimed at preventing drug use and violence.

The articles in this section review research related to these special initiatives. The first two articles deal with issues related to youth development, a key concept in addressing the needs of at-risk youth, whether in school or in the juvenile justice setting. The first article, written by Shepherd Zeldin, Mary Kimball, and Lauren Price, is an annotated bibliography on the topic, while the second, a brief piece by Bethann Berliner and Bonnie Benard, discusses what schools can do to foster resiliency in young people.

The last two articles in this section deal with two prevention purposes for which LRE has been used. In the first of these, J. David Hawkins, Michael W. Arthur, and Richard F. Catalano review research on prevention of substance abuse. In the second, Delbert S. Elliott, director of the Center for the Study and Prevention of Violence, provides a trenchant overview of violence prevention programs that work. The Center has produced a number of useful research reviews, including the ground-breaking, though now somewhat dated work by Tolan and Guerra (1994). The Center is planning a revision of this piece in the near future. Readers should also be aware of the series of "Blueprints" being developed by the Center. These blueprints provide step-by-step instructions for implementing ten exemplary violence prevention programs. For more information about the blueprints, contact the Center for the Study and Prevention of Violence, University of Colorado at Boulder, IBS #10, Campus Box 442, Boulder, CO 80309-0442; http://www.Colorado.EDU/cspv/blueprints.

Reference

Tolan, Patrick, and Nancy Guerra, *What Works in Reducing Adolescent Violence: An Empirical Review of the Field* (Boulder, CO: Center for the Study and Prevention of Violence, University of Colorado, 1994).

What Are the Day-to-Day Experiences That Promote Youth Development? An Annotated Bibliography of Research on Adolescents and Their Families

By Shepherd Zeldin, Mary Kimball, and Lauren Price, Center for Youth Development and Policy Research, Academy for Educational Development

Developmental Opportunities

*Formal and Informal Instruction and Training**

Past research is clear. Simply presenting academic information to young people does not lead to school success. Similarly, simply presenting information on drugs or pregnancy does not lead young people to avoid engagement in problem behaviors. The studies in this review clearly demonstrate that young people certainly need information, but more importantly, they need the opportunity to be active learners and critical thinkers—to take information from various sources and experiences, to manipulate it and test it, and to create their own meaning of the information. Active learning can be witnessed when young people:

- Discuss information and ideas with others
- Use the ideas to make decisions, set goals, create rules
- Reflect on their knowledge and experience
- Can make choices and are responsible for their own learning
- Are challenged to use and practice higher-order thinking

The studies indicate that positive outcomes can be achieved in both formal and informal settings. For example, active learning can profitably occur in programs—experiential learning, cross-age tutoring and cooperative learning—where the young person has the opportunity to engage in active learning with peers, elders, teachers, local government officials, and with people of different cultural backgrounds. However, active learning is not limited to program or school settings. Young people also benefit, the research indicates, when families encourage active learning through the expression and discussion of different points of view, ideas, and experiences. Regardless of the setting, when young people are given legitimate opportunities to become active learners, they are most likely to achieve desirable outcomes.

Schools

- In a synthesis of research from a number of disciplines—especially developmental and cognitive psychology—Howard Gardner (1983)[1] maintains that humans possess multiple intelligences including linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal. His review indicates that each needs to be cultivated for healthy development, but our existing schools are typically organized around the linguistic and the logical-mathematical intelligences only and students are tested and sorted accordingly (1991).[2] For example, Toth and Baker (1990)[3] examined specific ways in which schools promote youth creativity. In a study involving 116 students in grades 6, 8, and 10, the authors found that high levels of creative ability were enhanced when decisions about the use of available "classroom time" were based on *the degree to which young people were actively engaged*, not on a "set" schedule of activities.
- Gottfredson (1986)[4] evaluated a school-based program that *restructured the classroom to ensure student involvement in shared decision making and classroom management, coopera-*

*This literature review does not include studies on employment "training." Future work should consider the many studies in this area.

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tive learning strategies, individual learning plans for targeted "high risk" students, and frequent monitoring of progress. After three years of this intervention, students in the "experimental" schools reported lower feelings of alienation, higher rates of attachment to school, higher educational expectations and belief in school rules, in comparison to randomly assigned students in "control" schools. These comparisons also showed lower rates of drug use and delinquent behavior among students in the "experimental" schools.

- Wehlage (1989)[5], in a study of several schools in high risk environments, found that those *schools that promoted problem solving, decision making, goal setting, planning and helping others*, had significantly higher graduation rates than did other schools with similar risk factors.

- In the longitudinal study of High Scope's Perry Preschool Project that followed 123 predominantly African-American children from ages 3 and 4 to age 19 (Berrueta-Clement, 1984),[6] giving young children the opportunity to be *active participants in learning and problem solving, and providing a high degree of interaction between adults and children and between the children themselves* was associated with an array of traditional outcomes including: employment, high school graduation, college or vocational training, lower delinquency, fewer teenage pregnancies, and a lower rate of participation in special education. In a related study, the authors found these relationships extended to lower rates of alcohol and other drug use (Schweinhart 1986).[7]

- Slavin (1990)[8] reviewed the effects of cooperative learning strategies on self esteem in 15 controlled studies. Cooperative learning strategies are those characterized by *children working together in small groups as team members on shared academic tasks; and using a structure that is cooperatively determined, rather than dictated entirely to them by adults.* Eleven of these studies showed significant increases in some aspect of self esteem. A heightened sense of altruism, empathy, and acceptance of differences of others are other key outcomes of these cooperative learning strategies, as is increased development of an internal locus of control.

- Knapp et al. (1993)[9] determined that the typical instructional fare offered students in high-poverty schools was unnecessarily fragmented and oversimplified. Authors of the three-year investigation of 96 classrooms in three states concluded that in comparison with conventional practices, *instruction that emphasizes meaning and advanced skills is more effective at teaching advanced skills, is at least as effective at teaching basic skills, and engages children more extensively in academic learning.*

- The San Ramon project focuses on creating caring communities that build teacher, parent, and child involvement. Its major features include *having students create classroom norms and rules, cooperative learning, and a school-wide "buddies" program that pairs older and younger students.* Results of its evaluation (Battistich, et al., 1989)[10] indicate that students participating in this program were more cooperative and considerate, felt more accepted by classmates, were better able to resolve conflicts equitably and defend their views, and were more willing to allow peers to participate in group decision making. They were also less anxious socially and had more friends at school.

- In a sample of 66 urban youth, all of whom had histories of school failure, representing a variety of ethnic and economic backgrounds, the schools' ability to consistently help the *students learn how to set goals, make decisions, and understand the consequences of their actions* was a key factor in enabling them to make the transition to school success (Gregory, 1995).[11]

- In a longitudinal study of children 10 to 11 years old over six years' time, Rutter (1979)[12] found that positive school experiences, represented by *important task accomplishments*, are key ingredients to young people developing a positive self-concept and sense of self-efficacy. These accomplishments are to be interpreted broadly, including social success, the taking of positions of responsibility, and success in non-academic pursuits such as sports, music, and crafts.

- Rutter et al.'s (1979)[13] longitudinal study of youth in London focused on schools that had matching demographic characteristics but very different rates of delinquency, attendance, and academic attainment. Key features of the positively performing schools that were not present in negatively performing *schools included high*

expectations for all students, lots of out-of-school activities, use of library facilities, vocational opportunities, a variety of extra curricular opportunities, and the willingness of the schools to allow students a voice in decision making. Importantly, these discrepancies, and their relationships with problem behaviors, became even more pronounced over time (Benard, 1991).[14]

- When students *work cooperatively in mixed-race groups*, all students show improved problem-solving skills, perhaps because such groups promote equal-status contact, and favorable norms. Cooperative learning also improves achievement, self-esteem, and intergroup relations for both white and minority children, probably because it fosters positive peer interaction. Although this research was carried out with younger students, it has promising implications for secondary school students as well (Slavin, 1983).[15]

- In a study of 25 secondary schools, Jeanne Oakes (1985)[16] found that tracking in secondary schools resulted in unequal academic opportunities to the stratified groups. Students in higher groups received *more access to and practice in higher order thinking skills*. Students in lower tracks are asked to concentrate on basic skills, such as memorization, and more time is spent on classroom control. Lower track students had *little access to information needed to pursue higher education*. For those in lower tracks, a large body of literature shows that tracking is related to poorer academic achievement (Gamoran & Berends, 1987),[17] educational aspirations (Vanfossen et al., 1987),[18] attitudes about school and self-esteem (Bridge et al., 1979),[19] disruptive behavior (Schaefer & Alexa, 1971)[20] and the likelihood of dropping out of high school (Natriello et al., 1989).[21] In a meta-analysis of several dozen studies, Stockard and Mayberry (1992)[22] conclude that in general "greater learning takes place in heterogeneous settings" (p. 17).

- One study found that when given increasing *responsibility for their own learning*, student capacity for independence increased over time. Data from a longitudinal study of adolescent development of 2,300 sixth and seventh graders provide the basis for the hypothesis that optimal developmental outcomes should result from an *environment that gradually reduces adult control as the youth's desire for autonomy increases* (Eccles, 1991).[23]

Active Learning in Out-of-School Settings

- Englander-Golden's (1987)[24] *Say It Straight* program emphasizes assertive communication skills in a highly participatory approach. It gives the young people the *opportunity to structure activities around topics and issues that they feel are important to their own lives*. Evaluation results indicated that students who had been through the SIS program had 4.5 times fewer juvenile criminal offenses over a one and one half year period.

- One study examined whether experience in an experiential learning program would alter high school students' attitudes toward and knowledge about local government; they also wanted to identify which characteristics of the program were most valuable. Fifty-nine students in the experimental group were *matched as interns with county legislators; they visited local government offices and talked with officials, attended sessions of the legislature with their sponsor, and took part in classroom seminars to reflect collectively on their experiences*. A delayed-treatment comparison group was formed from the 29 students who would be participating in the program at a later point. Both the intern and the delayed treatment groups showed improved scores on each of the measures from the pre- to posttest, though gains for the interns were higher. On three of the inventories—knowledge of local government, feelings of political competence, and perceived government responsiveness—students' gains could be attributed to participation in the program (Hamilton & Zeldin, 1987).[25]

- A study examined the Jones-Village partnership program, which pairs eighth grade students and residents at a local retirement village in a mostly white, middle- to upper-middle class community in Ohio. For a six-week period, 30 students spend two class periods each day with the elders. The youth-elder pairs are formed deliberately; a shy student might be matched with a particularly gregarious adult, for example. The "opportunity" is for *students to actively engage the elders in discussion and activity, and to reflect as a group on issues raised by the experience*. "Support" comes in the *form of caring relationships between the partners*. Over a number of years, pre- and

posttest comparisons between participant and control groups have demonstrated improved self-concept, communication skills, and attitudes toward aging and the elderly (National Center for Service Learning in Early Adolescence, 1991).[26]

Active Learning in Families

- *Family environments in which members are encouraged and willing to express their own points of view, and in which disagreements with one another are tolerated*, are associated with advanced adolescent identity development and interpersonal skills (Cooper, Grotevant & Gordon, 1983).[27] Similarly, adolescent ego development is greater in families in which discussions are characterized by relatively *frequent discourse that reflects problem solving, empathy, and acceptance*, and relatively little interchange that is devaluing, judgmental, or constraining (Hauser et al., 1984).[28]
- Some underscore how individuality and connectedness in family relationships are linked with adolescent identity exploration and perspective taking. These adolescents tended to be members of families that flourished by *examining their differences, but within the context of connectedness* (Cooper, Grotevant & Condon, 1983; Grotevant & Cooper, 1986).[29]
- Two studies have found that democratic parents, those who encourage teenagers to participate in *decision-making* processes and *consider alternatives* are most likely to foster progress towards identity achievement (this is contrasted to autocratic and permissive parents who contribute to identity foreclosure and diffusion) (Adams & Jones, 1983; Enright et al., 1980).[30]
- In one study, children's moral development over a two-year period was best predicted by *a challenging parental discussion style (e.g., eliciting the child's opinion, asking clarifying questions, paraphrasing, and checking for understanding) and supportive interactions (e.g., humor, listening responses, praise, and encouragement to participate), combined with the presentation of higher-level moral reasoning*. The least moral development was predicted by parenting clusters that involved affectively conflictual interactions. Presentation of higher-level moral reasoning was not predictive of development in the absence of supportive and representational interactions. Sixty-three family triads (father, mother, child) were tested when the children were either in grade 1, 4, 7, or 10 and again two years later (Walker & Taylor, 1991).[31]

Challenging Rules and Responsibilities

It appears that active learning promotes positive outcomes most readily when it is done with a purpose. It is this context of purpose and participation that motivates the young person to capitalize on the opportunities for active learning and not simply to let them pass by. Available research suggests that there is an "added value" when active learning is combined with opportunities to take on new rules and responsibilities through:

- Being a valued member of an organized group
- Contributing and having an influence on communities or other people
- Engaging in part-time work, but only when such work has "developmental qualities."

Membership in Organized Groups

Research has long demonstrated that being a member of a family—one where the young person receives ongoing love and support, high expectations, and fair discipline—is perhaps the strongest determinant of desirable youth outcomes. This finding is witnessed throughout the present literature review. At the same time, adolescents can benefit greatly through membership in extracurricular activities, in youth organizations, and in religious organizations. Additionally, schools can be structured in ways that also allow young people to feel as though they are valued members of a larger group.

The research indicates many benefits of group membership to the young person. Often noted is that membership creates and strengthens the adolescents' ties to other people and allows for social integration into the larger community. Through membership, young people have a safe place to go (one that is most often voluntary) and they can draw strength from other people and from a collective group identity. Membership offers a place to explore and celebrate spiritual beliefs, to be featured in key roles, and to participate in fun activities.

School Membership

- *Cooperative learning is a strategy of creating a better sense of community within individual classrooms.* In addition to improved social relationships—particularly in heterogeneous, multi-ethnic settings—positive effects have been documented consistently for such varied outcomes as self-esteem, acceptance of handicapped students, ability to work with others, and attitudes toward school. Moreover, positive effects on academic achievement have been shown at all grade levels, all subject areas, in urban, suburban, and rural schools, and for all ability levels of students (Slavin, 1991).[32]

- Felner et al. (1993)[33] studied the effects over five years of a school-based intervention that targeted students' transition from junior high to high school. The program changed the role of the *classroom teacher to one of a home/school liaison and counselor to the children, and reorganized classes so that students stayed with their same peer group.* The goal was to enhance the sense of support and belonging felt by the students. Findings included a 50% reduction in dropout rate as compared to a matched comparison group (and in comparison to the rest of the school system in that district) and significant reductions in behavior problems, depression and anxiety, delinquency and substance abuse.

- In a sample of 66 urban youth, all of whom had histories of school failure, representing a variety of ethnic and economic backgrounds, attending a school that combined a philosophy of responsibility with a culture of noticing and caring was a key factor in helping them make the transition to school success (Gregory, 1995).[34]

- Goodenow (1992)[35] administered an 18-item survey to urban middle-school students which measured their psychological sense of school membership (PSSM). Questionnaire items included: *perceived liking, acceptance, and inclusion; respect for and encouragement of participation; and the perceived responses of other students.* The author found even after controlling for the impact of the immediate peer group's values that a strong PSSM strongly correlated with several measures of motivation, engaged and persistent effort in academic work, grades, and teacher-rated effort.

- Literature on classroom environment suggests that grade-related changes in the school social environment accompany a general pattern of decline in schoolwork. After the move to junior high school, students perceive critical differences: they report that teachers care less about them, are less friendly, and grade less fairly than elementary school teachers. Furthermore, when students move to junior high, the size of the student body increases; students are given fewer opportunities for interaction with the teacher; and student-teacher relations deteriorate. Being in *a secure, predictable, and responsive environment* over the vulnerable years may be the best aid for young adolescents' affective and socio-emotional development (Eccles & Midgley, 1989; Eccles, Midgley & Alder, 1984; Eccles et al., 1988).[36] Subsequent research has unequivocally shown that *relatively small secondary schools* enhance personal development and pro-social behavior among adolescents (Barker and Gump, 1964).[37]

- Smaller schools have the advantage of offering more chances for each *student to be featured in a key role.* Because small schools have a limited pool of students available for activities, even marginal students are integrated into the social structure. Several studies have also found less negative behavior in small schools (McPartland & McDill, 1976).[38] Students who have attended *relatively small high schools* go on to participate more actively in political, religious, community, sports, service, and other social activities (Lindsay, 1984).[39]

Participation in Extracurricular Activities and Youth Organizations

- Personal identity is promoted when one has the opportunity to *identify life alternatives and make and experiment with choices* (Hauser & Follansbee, 1984; Marcia, 1966).[40] Hence community opportunities that promote the active and realistic exploration of broad identity goals, such as educational and occupational choices, are beneficial.

- Participation in athletics neither depresses nor particularly improves academic performance. Participation in other extracurricular activities, however, has relatively strong and favorable effects on academic performance. *Extracurricular activities link students to the larger*

society of the school, especially to teachers (Hanks & Eckland, 1976).[41]

- In statewide surveys of alcohol and other drug use among students in grades 6-12 in Hawaii (Gabriel et al. 1992)[42] and Washington (Gabriel, 1991),[43] students who did not *participate in extra-curricular (student government, music, athletics) or community activities (Little League, Scouts, church groups)* reported a higher rate of alcohol and other drug use than did students who participated in a moderate number of these activities. Among high school students, however, students who participated in a large number of these activities (five or more), had a higher prevalence of alcohol use than students who participated in only a few. In other words, a moderate level of participation in positive activities was associated with the lowest levels of AOD use. Students who were "social isolates" at one extreme, or "social butterflies" at the other, exhibited higher rates of alcohol use.

- One study found that those communities which offer *young people opportunities to be involved in structured activities in school, religious institutions, or other organizations* (e.g., 4-H, Boys and Girls Clubs) have fewer numbers of young people engaged in problem behaviors (e.g., substance use, early sexual activity). Of 44 communities with a majority of youth involved in structured activities (e.g., extracurricular sports, clubs, community organizations), 20 were among the healthiest communities and only four were among the least healthy communities—a five-fold difference ["community health" was determined according to the percentage of youth engaged in problem behaviors] (Blyth & Leffert, 1995).[44]

- In the Kauai longitudinal study, Werner and Smith (1992)[45] found that *participation in extra-curricular activities*—such as 4-H, YMCA, and YWCA—as well as interest in hobbies, differentiated between resilient and non-resilient youth. One study used a nationally representative longitudinal sample from the National Survey of Children, in order to examine predictors of young adult "positive well-being" and the absence of behavioral "mis-steps." An index of positive well-being is created by summing subscales measuring life satisfaction, low or no depression, community involvement, religiosity, closeness with parents, and placing importance on correcting social and economic inequalities. A mis-step is defined as the occurrence of any of the following behaviors or acts before the age of 18: use of hard drugs, running away from home, voluntary premarital sex, a premarital birth, and dropping out of high school. Neither involvement in clubs during high school or the actual classroom environment are related to the occurrence of mis-steps. However, inputs that predict higher scores on the index of positive well-being include having *a close and warm relationship with parents, being involved in clubs*, and not having parents receive a note from the teacher due to discipline or behavior problems. In addition, young adults from poor families, those whose parents were better educated, and those whose custodial parent had a lower number of marital transitions are more likely to have higher scores on the measure of positive well-being (Moore & Glei, 1995).[46]

- One study examining a number of rural communities and small cities found that young people engage in fewer problem behaviors when they have *connections to the major institutions of the community—religious organizations, schools, and the variety of activities which community-based organizations provide*. Youth in the healthiest communities were more likely to attend religious services, to feel their schools were caring and encouraging places, to be involved in structured activities, and to remain committed to their own learning (Blyth & Leffert, 1995).[47]

- Researchers examined the long-term impacts of participation in 4-H activities for a nationally representative sample. Random sampling was used to generate a group of 710 former 4-H members, 743 former members of other youth organizations, and 309 non-participants. Overall, the researchers found the strongest positive effects for females, those who had greater years of participation, and those who had joined 4-H at younger ages. For these respondents, 4-H participants scored significantly higher than respondents in the other two groups on two indices of personal development: working with others and developing a sense of responsibility. In addition, 4-H participants and other members of youth organizations showed higher levels of self-confidence (compared to their peers who had not participated in youth organizations). When the respondents were asked what was most valuable about their experiences,

they most often cited the *opportunity for contact with people, especially adults.* Other responses (from most to least common) included: *the opportunity to develop new skills, the opportunity to contribute (to society or others), and practice with communication or cooperation* (Ladewig & Thomas, 1987).[48]

- Play and leisure time are essential to the development of positive social skills. In a study of preschoolers, Connolly, Doyle, and Reznick (1988)[49] found that in pretend play children acted more mature than they did in non-pretend activities. Youngsters also demonstrated fewer negative emotions such as anger or frustration. They also talked more about what they were doing and had more success influencing others in pretend settings than in the other context. The authors reported that children moving from non-pretend play to social pretend play demonstrate more positive, more successful, and more developmentally mature social interaction. Other researchers have confirmed the *importance of play* in later cognitive and social development (Johnson, Hatch & Amos, 1990;[50] Gehlbach, 1991).[51]

Membership in Religious Institutions

- One study found that churches are powerful sources of assistance to new Southeast Asian immigrants and their children. Religious beliefs were found to be associated with academic achievement within this group (Caplan, Whitmore & Choym, 1989).[52]

- In one study, African-Americans reported that their religious beliefs help them to get along with others and to accept the realities of the American occupational structure. Furthermore, African-American adolescents have reported that religion helps them in their family interactions. *The church has been described as a structural bridge between the African-American family and entrance into the larger society* (Scanzoni, 1971).[53]

- One study report presents results on the relationship between indicators of family strengths and youth outcomes in a large representative sample (13,014) of U.S. households in 1987. Of those households, 2,300 contain an adolescent between the ages of 12 and 18. Demographic and socioeconomic characteristics of the adolescents and their families are used as control variables, so that the association between family strength measures and adolescent well-being can be examined above and beyond these characteristics. A higher level of *parental involvement in youth organizations*, more parent-child time together, more parental encouragement of independence, and less parental depressions are associated with lower adolescent behavior problems scores, above and beyond the background characteristics. With regard to adolescent delinquent behavior, *more church involvement*, more parent-child time together, and higher parental commitment to family are associated with lower levels of delinquent behavior, net of background characteristics. However, less *parent involvement in youth organizations*, more parent-child time together, and a higher level of commitment to family are all associated with lower levels of delinquent behavior in separated or divorced families. Additionally, parents who encourage independence in their children report less parent-child conflict (Brown, 1993).[54]

- Moore and Pachon reported that *Pentecostal churches* among Puerto Ricans brought people together, promoted strong group identity, and improved coping mechanisms (Moore & Pachon, 1985).[55]

Contribution and Influence

The research indicates that young people may benefit from specific types of group experiences—the opportunity to contribute and be of service to others and to take leadership in such endeavors. These "acts of helpfulness" or "acts of influence" can occur through many types of school-based and out-of-school programs: community service and improvement, cross-age peer tutoring, and the like. But, the research also indicates that contribution to the family, be it taking on household responsibilities or care of younger siblings, can also have positive impacts on young people. Regardless of the setting, young people benefit when they have the opportunity to:

- Plan projects and tasks that contribute to the welfare of others
- Apply and practice new skills and new roles
- Connect the experience to school-based learning
- Work closely and collaboratively with family members, adults, and peers

- Engage in projects characterized by real tasks with real consequences.

Family

- *Acts of "required helpfulness," such as taking on household responsibilities or care of younger siblings*, are strongly related to successful development in work and school. Anthony (1974)[56] and Bleuler (1984)[57] found this in their clinical studies of offspring of psychotic parents. Elder (1974)[58] found this in studies of children who had lived through the Great Depression, as did Clark (1983)[59] in his study of contemporary black youth from working-class families.
- In a synthesis of many ethnographic reports, it was found that in many economically poor families, *early responsibility, when properly managed and channeled*, contributes to later social mobility, and it encourages mastery, enhances self-esteem, promotes positive gender role identity, and facilitates family cohesion (Jarrett, 1995).[60]

School and Out-of-School Settings

- Studies indicate that personal identity is promoted when an adolescent has the opportunity to experiment with different roles and responsibilities—a psychological moratorium—a period of time without excessive responsibilities or obligations to restrict the pursuit of self-discovery. Identity formation is the consolidation of societal roles, not merely self-attributes (e.g., self-esteem) (Erikson, 1968).[61]
- A longitudinal study found that children who were given the opportunity to *participate in "required economical and social acts of helpfulness" (i.e., community service, peer tutoring)* had a greater likelihood of success in adulthood (Werner & Smith, 1992).[62]
- Researchers have found positive outcomes when *young people act as tutors*. Conrad and Hedin (1991)[63] found improvements in tutors' problem solving skills along with their sense of personal and social responsibility. A Carnegie Foundation report (Harrison, 1987)[64] asserts that many valuable job skills and attitudes result from *participation in community service programs*. Among those cited are responsibility for task completion, getting along with others, and punctuality and reliability.
- In a five-year ethnographic study of over 60 neighborhood-based organizations in three urban areas, McLaughlin (1994)[65] found those creating a *sense of community and family through opportunities for community service, cross-age peer helping and other "required acts of helpfulness"* were associated with the youth's "expectation of a viable future, their belief that they can be and do something other than succumb to the desperate and dead-end prospects of their neighborhoods."
- In a series of cross-cultural studies, Kurth-Schai (1988)[66] found that youth *participation in socially or economically useful tasks* is associated with heightened self-esteem, enhanced moral development, increased political activism, and the ability to create and maintain complex social relationships. Conversely, this literature shows that the lack of this meaningful participation yields an external locus of control, and the expression of destructive, anti-social behaviors.
- When the service learning program includes tutoring of others (of any age), the effects can often be more dramatic on the tutor than on the learner. In an analysis of student tutoring programs, Reisner et al. (1989)[67] reported that college-age tutors working with younger, educationally and economically disadvantaged students obtain practical work experience, improve their communication and leadership skills, enhance their self-esteem and self-confidence, improve their academic performance, and develop greater commitment to community service.
- In a study that investigated the impact of volunteer experience, participants were drawn from students who took part either in child care or community improvement projects. "Opportunities" were defined as students' participation in the program, typically over an eight-week period. *Community improvement* volunteers were expected to have greater opportunity for decision-making and autonomy, because child care *volunteers* served largely as helpers for adults. Both groups of youth were expected to acquire new skills through engagement and practice. Youth Volunteers showed significant gains on the Social Responsibility subscale, but not on the full inventory or on the Personal Responsibility subscale. As predicted, the community improvement volunteers showed greater gains in responsibility. In

addition, community improvement volunteers expressed greater willingness to volunteer again. Finally, interviews with students and adults revealed that the volunteers had acquired skills (esp. in the community improvement projects), gained insights about their own capabilities, and learned about the needs of others in their communities (Hamilton & Fenzel, 1988).[68]

- Research examines the impact of experiential education on adolescents' social, psychological, and intellectual development. The 30 programs included in one study *all integrated experiential learning into the school curriculum*; they *placed students into new roles with real tasks and real consequences, in community settings*. Four types of programs were identified: (1) voluntary community service; (2) career internships; (3) community study/political action; and (4) adventure education. Data were gathered with 4000 participants. In addition, control groups were also included at each site. Pre- and posttest scores on each of the inventories were compared. Compared to the control groups, the experiential education students showed significant gains in self-esteem. The gains were greatest for participants in the outdoor education programs. Tests of moral reasoning also revealed significantly greater gains for the experimental groups. The researchers attribute these gains to the opportunities for role-taking and reflection. Overall, the experimental groups showed positive gains on the Social and Personal Responsibility Scale over the course of the programs. In addition, overall students showed greater gains in personal rather than social responsibility, and in their responsible actions rather than attitudes. Students in the experimental groups showed significant gains in their problem solving abilities. Two types of problem solving experiences were identified in the programs: (1) *direct exposure to interpersonal problems*; and (2) *integration of problem solving into the program seminars*. Gains were most significant for students who were exposed to both types of experiences than for either one individually. Where both types were absent, there were no gains in problem-solving. Students whose *experiences demanded autonomy* showed stronger gains in personal development. Students who had the *opportunity to work closely with others* showed gains in social development (Conrad & Hedin, 1982).[69]
- Serow (1989[70]; 1991)[71] shows a positive relationship between *campus climate* and participation in community service among students. Courses that *combine public service with related academic work* often help increase student understanding of complex material.
- In a meta analysis of 120 school-based drug prevention program evaluations and research studies involving self-reported drug use as an outcome, Tobler (1993)[72] found that *peer-led interactive programs* were far more effective in reducing drug use than prevention efforts that were not interactive in nature. Interactive programs are those with a focus on building a repertoire of interpersonal skills and social competence. Key components are *active involvement of adolescents with each other and an interpersonal focus in this involvement*. Non-interactive programs are those that focus on knowledge or affect delivered by an adult with little or no interaction among the students. Furthermore, those interactive programs that included community-wide support evidenced effects nearly double those of interactive programs without community-wide support.

Part-Time Employment

A majority of young people engage in part-time employment. Initially, it was believed that such opportunities would convey benefits to adolescents, but the opposite was typically observed. Specifically, part-time employment was typically associated with few desirable outcomes and often contributed to a range of problem behaviors. The research indicated that such findings could be attributed in large part to the poor quality of the work experience offered to young people. Factors that contribute to negative outcomes included repeated exposure to work place stress, autocratic supervision, work that was perceived as meaningless, work that conflicted with other roles, and the impersonal nature of organizations.

Obviously, much of the part-time work that is available to adolescents can be defined by the above characteristics, and hence it is not surprising that part-time work typically conveys monetary, not developmental, benefits to young people. There are some studies that examine the qualities of part-time work that promote desirable youth outcomes. Such research suggests that when essential opportunities

are embedded in work, then work can be beneficial to young people. Specific opportunities include:

- The challenge to learn new skills on the job
- Work that is relevant in that it relates to current educational and occupational aspirations and pursuits
- Work that requires skills perceived to be useful in adulthood
- Work that entails the completion of complex tasks.

Net Influence of Employment

- Steinberg and Dornbusch (1991)[73] investigated the *effects of part-time employment* on adolescent development and found that long work hours were associated with lower academic achievement in school and result in greater psychological stress, drug and alcohol use, delinquency, and autonomy from parents. Moreover, they found no positive effects (such as self-reliance, self-esteem, or work orientation) from paid work. Other studies confirm this bleak news (March, 1991[74]; Barone, 1993).[75]
- Comparing data from first-time workers and youth who had never held a job, the authors investigate the *impact of early work experience*. Using participation in the labor force as their primary independent variable, the researchers recorded for each youth: length of time worked, hours on the job each week, and the total exposure, or the product of the first two measures. Workers showed a more positive orientation to work, greater self-reliance, and more practical knowledge of the workplace. Although self-reliance was related to total work exposure, the other outcomes were affected only by work status rather than the extent of a teen's involvement. Long-term plans were not affected by any of the measures of work involvement. The authors also found some support for the occupational cynicism model of early work experience. On measures of occupational reward values, the workers expressed less support for the intrinsic rewards of work: again, comparison of workers and jobseekers suggests that these effects are the consequences rather than antecedents of workplace exposure. Workers were also more cynical about work, and their level of cynicism was directly related to the number of hours on the job each week. Whether cynicism resulted from work experience could not be determined from the data (Steinberg et al., 1981).[76]
- Drawing upon a predominantly middle-class sample of youth, the researchers interviewed 100 teenagers and their parents. The teens were enrolled in tenth or eleventh grade at the time of the study, and all were *currently employed in their first steady, part-time job*. The positions held by the youth resembled those of their local peers: 40% worked in food service, 18% in retail sales, 15% in manual labor, 10% in clerical positions, 10% in cleaning, and 7% in skilled labor. In qualitative analysis of the interview transcripts four themes emerged: (1) Youth workers gain a more sophisticated understanding of the "nature and dynamics" of interpersonal relationships, between workers and their supervisors as well as co-workers; (2) *Exposure to strangers* fosters youths' sensitivity to different personalities and cultural backgrounds; (3) *Experiences with others, particularly customers,* help youth learn how to handle others. They learn about the customer-worker relationship, and how to control their own behavior to achieve a desired outcome; (4) Parents' comments lent additional support to the idea that work experience helps youth learn how to interact with others; yet some parents also noted that their children picked up the prejudices and unpleasant language and habits of their co-workers (Steinberg, et al., 1981).[77]
- To examine whether early work experience has different effects on boys versus girls and on older versus younger adolescents, researchers analyzed data from two waves of the National Survey of Children, conducted in 1976 and 1981. Work status was the independent variable. Both formal and informal sources of employment were included. Overall, the researchers found little association between work experience and the outcome measures; only the child's self-reported well-being and the teachers' report of behavior were associated with employment. Among the younger students, significant effects were found for boys only. Working the median number of hours or less predicted greater satisfaction with one's life. Among the older students, significant effects were found for girls only. Girls' satisfaction with their lives diminished as they spent more *hours on the job*, especially when girls worked more than the median (9

hours/week). For measures of behavior, work experience showed no significant effects for girls or the older boys. Among the younger boys, in contrast, greater involvement in work (more hours/week on the job) predicted better behavior in school (as reported by teachers) (Yamoor & Mortimer, 1990).[78]

- Using data from a representative sample, researchers examined relationships between early work experiences and future career, educational, and familial plans. Overall, *experience in the work force* has a positive effect on boys' career orientation, educational plans, and anticipated family and community involvement. Boys who had worked for more months had higher educational plans, and with more intense involvement, their career commitment grew. Moreover, work experience enhances boys' family orientation and the importance they give to relationships with wives, children, parents, and other relatives. Yet, as the duration of boys' employment increases, they express less desire to have their wives work after marriage, and the researchers conclude that early work experiences appeared to "traditionalize" adolescent boys. Girls' work experiences, in contrast, lead toward less traditional expectations. With more experience in formal work situations, the girls plan to delay marriage and anticipate less involvement with families and friends. As the duration of girls' employment increases, the researchers note that the beta coefficients in their equations were small, but the patterns were consistent. Additionally, they cannot discount the possibility of selectivity—for example, that less traditional girls opt for greater involvement in work during adolescence (Stevens et al., 1992).[79]

Quality of Work

- Using data from a predominantly middle-class sample of adolescents, researchers investigated the extent to which early work experiences have negative effects on the health and well-being of adolescents. (On average, employed teenagers spent 20-24 hours/week on the job.) "Opportunity" was operationalized as youth's participation in the labor force; separate indices of work status and time spent in the workplace were also recorded. Rather than "supports," the researchers looked at stressors, including environmental conditions in the workplace, work tasks, conflicts between work and other roles, style of supervision, and wages. Early work experience appeared to have the greatest impact on the behavioral indicators: absence from school and use of cigarettes, marijuana, and alcohol. Among both and girls, *exposure to workplace stress* was associated with alcohol and marijuana use. For girls only, the amount of time in the workplace and the conditions under which youth worked were more significant predictors than work status alone. Both boys and girls were adversely affected by high levels of noise, direct heat, time pressure, and other environmental stressors in the workplace. *Work that was meaningless and conflicted with other roles* also predicted higher levels of psychological and physical symptoms. Yet, the sex of the worker was also significant. For girls, *an impersonal organization* (one of the measures of work stress) was strongly associated with physical and psychological symptoms. Girls also showed greater absence from school as a function of work involvement and work stress. Surprisingly, boys who worked under more stressful conditions showed fewer psychological and physical problems. More injurious to them was autocratic supervision at work (Greenberger, Steinberg & Vaux, 1981).[80]

- In a study that looks at what teenagers actually do on the job, two magnet high schools (preparing students for careers in business, technical and trade occupations) were selected from an industrial city in the Midwest. Of the 359 students randomly selected to participate, 211 were employed, and 42 of them in school-supervised positions. (Non-working students were not included in the analysis.) The researchers investigated the impact of 19 work-related "opportunities." They hypothesized that three job characteristics would affect motivation and cynicism: cognitive complexity (use of math, reading, writing), physical challenge, and the opportunity to develop work-related social competence. These qualities were measured by questionnaires. Other measures, also assessed by questionnaire, included self-reported autonomy, school-work conflict, school-work connection, and job stress. Overall, school-work conflict proved to be the strongest predictor of both attitudinal measures. Greater conflict was associated with less motivation to do good work and greater cynicism toward work. *The opportunity to learn on the job* and *physical challenge* predicted greater motivation among youth workers. At

the same time, students who reported more *opportunity to apply their skills and abilities* showed less cynicism about the workplace (Stern et al., 1990).[81]

- In the national *Monitoring the Future* survey, Johnston, O'Malley, and Bachman (1993)[82] examine the relationship between part-time work and illicit drug use. Like the results reported in Washington and Hawaii (Gabriel, 1991[83], Gabriel et al., 1992)[84] the relationship is curvilinear. Small amounts of part-time work (less than five hours per week) are associated with lower rates of alcohol and other drug use, while more heavy involvement in part-time work is associated with higher rates of AOD use. A more powerful predictor they explore in more in-depth analyses, however, relates to the quality of the part-time work. The more *students feel that the part-time work relates to their current educational and occupational aspirations and pursuits*, the less likely they are to use alcohol and other drugs (Bachman & Schulenberg, 1993)[85]

- Using data gathered from a random sample of ninth grade students attending public schools in St. Paul, MN, the researchers investigate linkages among work experience, job characteristics, mental health, and behavioral adjustment. When they looked more carefully at the intensity of youths' employment, they found no evidence of negative effects among youths who worked less than the mean number of hours. Girls who *worked a moderate amount* had a more internal orientation, fewer disciplinary problems at school, and less frequent use of alcohol and cigarettes. Boys who *worked a moderate amount* reported a greater sense of well-being. Interestingly, the researchers found no significant differences between youths who were not employed and those who worked more than the mean number of hours per week. When the researchers related features of the work environment to the outcome measures, they observed significantly different patterns for girls and boys. Among the male respondents, *work stress* (indicated by the need for hard work, a job that drains energy, exposure to heat, cold, or noise) predicted greater depressive affect, self-derogation, externality, and less internal control. In contrast, boys whose *jobs required skills that would be useful in adulthood* showed greater internal control, greater well-being, and higher self-esteem. *Jobs that entailed complex work* with things was also associated with greater well-being in boys. For girls, school-work *conflict* emerged as the strongest predictor. When work interfered with school, there was a negative impact on all of the mental health measures. In contrast, when there were positive connections between school and work, girls reported higher self-esteem, greater well-being, and less depressive affect. On behavioral measures, sex-differences were observed again. Boys who had the *opportunity to use their skills on the job* had lower levels of alcohol use, and predictable work was associated with fewer disciplinary problems at school. For girls, more hours spent on the job was associated with more smoking and drinking. Opportunities for *innovative thinking predicted fewer problems at school*; yet, surprisingly, complex work with things was associated with more disciplinary problems (Mortimer et al., 1992).[86]

- The research relates work characteristics to well-being in ninth and tenth grade students. Working and non-working adolescents are compared. Overall, the researchers found no significant differences in the level of depressive affect between working and non-working students, for ninth or tenth graders. Among ninth grade working girls, *positive connections between school and work* predicted lower levels of depression. For tenth grade working girls, having responsibility for things that were beyond one's control was a significant predictor. No relationships were found between working conditions and well-being among ninth grade boys. However, the tenth grade students with poorer job conditions (greater stress, more conflicts between school and work, fewer opportunities to develop skills) showed greater depressive affect. Interestingly, and in direct contrast with research on adults, greater self-direction was also associated with depression in the boys (Shanahan et al., 1992).[87]

Developmental Supports

Ongoing Emotional Support

Clearly, young people benefit from the opportunity to be active learners and from the chance to take on challenging roles and responsibilities. But this is not enough. The research also indicates that young people can benefit when, on a daily basis, they are exposed to adults and peers who demonstrate ongo-

ing emotional support, characterized by nurturance and affirmation.

Support from Parents and Other Adults

One of the most fundamental experiences needed by young people is the receipt of emotional support, nurturance and affirmation from adults. The strongest source of support potentially comes from parents and guardians. However, young people also benefit from ongoing supportive relationships with other adults. The research indicates that a "caring adult"—be it a parent, teacher or unrelated adult—is, in part, one who consistently demonstrates the following to the young person.

- Genuine acceptance and affirmation
- Affection, warmth, and closeness
- Personal interest, respect for individuality.

Nurturance from Parents/Guardians

- A study that examined relationships between parental control and delinquency (e.g., vandalism, theft, trespassing) and "status-substance abuse acts" (i.e., skipping school, lying about one's age or identity, drinking alcohol, smoking marijuana) found that *attachment to each parent and parental supervision* negatively related to status-substance acts, while supervision was also negatively related to delinquency. Subjects were 872 white adolescents (ages 11 through 18; median of 14 years) living with both biological parents (Seydlitz, 1991).[88]
- In a report that examines the relationship between measures of family strengths and well-being in a nationally representative longitudinal sample of 1,126 young adults, ages 18 to 22 in 1987, with regard to parent-reported behavior problems, *family adaptability* is the only family strength measure to have a large and significant effect on behavior problem scores. The more adaptable and flexible a family is to change and stress during high school, the lower the young adults' behavior problem scores, above and beyond the family background characteristics. Finally, the following family strength indicators predict lower scores on youth-reported delinquent behavior: more *frequent parent-child communication*, and a higher level of parental commitment to marriage and family. Stronger punishment and more frequent parent-parent or parent-partner communication predict higher scores on youth-reported delinquent behavior (Sugland, 1983).[89]
- One study examines the relationship between *authoritative parenting (high acceptance and involvement, firm control, and psychological autonomy)* and adolescent adjustment in households that vary by race and ethnicity, socioeconomic status, and family structure. The sample for this study is comprised of approximately 10,000 ninth through twelfth graders from nine high schools in Wisconsin and California. Results reveal that adolescents from *authoritative homes* get higher grades in school, are more self-reliant, are less psychologically distressed, and less involved in delinquent activities than adolescents in nonauthoritative homes. The authors note that these differences are statistically significant, but small in magnitude (Steinberg et al., 1991).[90]
- One study found that *attachment to parents* was significantly and positively correlated with measures of self-perceived competence, especially during the child's transition into junior high school. Also, attachment to parents was found to be significantly but negatively related to adolescent feelings of depression and anxiety. The findings suggest that during times of change, parent-child attachment may buffer adolescent feelings of competence and emotional well-being. The sample was a non-random one with 47 subjects assessed three times in sixth and seventh grade. All subjects were white, and from middle- to upper-middle class two-parent families (Papini & Roggmann, 1992).[91]
- One study found that mothers' and fathers' enabling behaviors, particularly *acceptance and problem solving*, were significantly and positively associated with adolescent ego level. In contrast, it also found that parental constraining behaviors (e.g., devaluing, withholding) were negatively, though less consistently linked with adolescent ego level. The sample consisted of 61 families, each containing a mother, father, and adolescent (14 years old and/or high school freshman) with half chosen from a psychiatrically hospitalized population to obtain a larger range of ego development scores (Hauser et al., 1984).[92]

- Resilient adolescents are found to have better relationships with parents and receive more parental support. The parents are often less absent from the home; and the children are raised in an *environment where there is respect for individuality and family closeness as well as rule setting, discipline*, and defined roles within the family (Werner & Smith, 1982).[93] Even in a turbulent home the presence of one parent who has an *affectionate, warm, supportive, and noncritical relationship* with the child is conducive to stress resistance (Garmezy, 1984).[94]

- Studies on coping processes have highlighted three kinds of protective factors: family environments, support networks, and personality characteristics. Supportive family environments characterized by *parental warmth, cohesiveness, and closeness* can serve a protective function for at-risk adolescents (Compass, 1987; Hauser et al., 1985).[95]

- Teenagers who report feeling relatively *close to their parents* score higher than their peers on measures of psychosocial development, including self-reliance and other indicators of responsible independence (Steinberg & Silverberg, 1986)[96]; behavioral competence, including school performance (Hill, 1980; Macoby & Martin, 1983)[97]; and psychological well-being including self-esteem (Harter, 1983).[98] Moreover, teenagers who report *feeling close to their parents* score lower on measures of psychological and social problems, including drug use, depression, and deviant behavior (Barnes, 1984; Feldman, Rubinstein and Rubin, 1991; Jessor & Jessor, 1977).[99] This finding is richly supported from studies across socioeconomic and ethnic groups.

- Measures of four dimensions of family interaction—self-assertion, separateness, permeability, and mutuality—were found to be associated with ratings of the breadth and depth of adolescent identity exploration. Sons scoring high in identity exploration were more likely to have *fathers who expressed more mutuality and less separateness*. Daughters who rated higher in identity exploration had fathers who showed higher frequencies of relevant comments and *lower frequencies of indirect suggestions*. Higher-scoring daughters had mothers who expressed their suggestions directly. The sample included 84 white, middle-class, two-parent families with an adolescent (high school senior) and one sibling (Grotevant & Cooper, 1986).[100]

Personal Support From Teachers and Other Adults

- In a sample of 66 urban youth, all of whom had histories of school failure, representing a variety of ethnic and economic backgrounds, the *personalized attention* received from teachers, counselors, and other adults was a key factor in helping them make the transition to school success. In particular, several students were specifically motivated by individual teachers that they became attached to or classes they found interesting. They expressed appreciation of the *efforts teachers made to engage them in the subjects they were studying as well as the personal interest they demonstrated* (Gregory, 1995).[101]

- Werner and Smith (1992)[102] found that support provided by *teacher aides and peer tutors* in the first three grades was associated with higher reading skills and was one of the most potent predictors of successful adaptation in adulthood (success in work, marriage, and parenting).

- Researchers explored the relationship between supportive interpersonal relationships, self-esteem, and perceived opportunities. One hundred and ninety-two males and 462 female young adults participated in an eight-year longitudinal study of growth and adolescent development. Results indicate that for girls, *socially supportive relationships with parents, adults, and peers* at years 5 and 9 are more highly related to self-esteem at year 9 than for boys. In addition, socially supportive relationships at year 5 were significantly related to year 9 perceived opportunity (satisfaction with future; satisfaction with schooling; satisfaction with chance to be what they wanted) for girls, but not for boys. For boys, on the other hand, perceived opportunities at year 5 were significantly related to year 9 self-esteem. This relationship was not significant for girls. The authors conclude that earlier satisfaction with interpersonal relationships, especially those with family members, increases the perception of greater life-opportunities and self-esteem for young women. For young men, having positive expectations for the future in their later adolescent years enhances self-esteem in adulthood (Stein, Newcomb & Bentler, 1992).[103]

- Opportunities to be part of a cooperative enterprise, required acts of helpfulness, but most of all *supportive relationships (having one person in their lives who accepted them unconditionally)* promoted a strong sense of self-esteem and self-efficacy among children growing up in high-risk environments (Werner & Smith, 1992).[104]

- Hawkins et al. (1992)[105], through an extensive review of the literature on delinquency and alcohol and drug abuse, have focused on "bonding" to pro-social influences as the key protective factor in preventing these related problem behaviors. They identify four aspects of bonding that are crucial: attachment to parents, commitment to schooling, regular involvement in church activities, and a belief in the "generalized expectations, norms, and values of society."

Support from Friends and Peer Groups

Peers are also an important source of support and affirmation for adolescents. Certainly, the research demonstrates the potential risks of peers. If the young person chooses as friends a group of young people who engage in problem behaviors and who don't value school, for example, the adolescent is likely to adopt a similar destructive lifestyle. On the other hand, the research is equally clear that "prosocial peers" have positive influences on development. While young people can gain peer support through involvement in organized groups, the data indicate that youth friendships might have the most powerful influence on young people when they are initiated and sustained through the informal efforts of the young people themselves. Prosocial peers can be defined, in part, as those young people who offer:

- Friendship
- An interest in education and the well-being of the young person
- Encouragement to succeed
- Fun and relaxation
- Loyalty and intimacy.
- Based on clinical observation, the author finds that through *self-disclosure*, and by allowing oneself to become *vulnerable before a coequal*, adolescent friends share with one another their most personal thoughts and feelings, become sensitive to the needs and desires of others, adolescents gain a deep understanding of the other and the self. This intimacy has critical significance for future interpersonal relationships (including romances), and is crucial both to developing a sense of connectedness with others and individuating the self (Sullivan, 1953).[106]

- Adolescents with *satisfying and harmonious friendships* were found to behave appropriately in school, be motivated to do well, and often receive high grades. Additionally, teens who perceive their *friendships as supportive* have higher achievement test scores, report-card grades, and behavior ratings from teachers, are more involved in school, and place more value on what they learn there (Miller & Berndt, 1987).[107]

- Perceived support from friends may be unrelated to school performance (Dunn et al., 1987).[108] Furthermore, among lower income African-American adolescents in a senior high school, perceptions of support from peers (not just friends) were negatively related to grades (Cauce, Felner & Primavera, 1982),[109] possibly because peers themselves devalued school achievement (Cauce, 1986).[110] In a sample of 66 urban youth, all of whom had histories of school failure, representing a variety of ethnic and economic backgrounds, peers as well as adults in the school played an important role in supporting their efforts to make the transition to school success. Many students felt the need to separate themselves from friends who had influenced them to fail. In doing so, they either avoided "hanging out" with anyone or *sought out new friends who were interested in their well-being and valued education* (Gregory, 1995).[111]

- *Stable friendships* have several short-term benefits. On most school-related (achievement and behavior) measures, those who had stable friendships with similarly high-scoring peers out-performed all others (Epstein, 1983).[112] Adolescents with stable friendships tend to have positive reputations with peers, enjoy popularity, and be judged as well behaved by teachers, both before and after a school transition (Bukowski & Newcomb, 1984).[113]

- In a sample of 66 urban youth, all of whom had histories of school failure, representing a variety of ethnic and economic backgrounds, *girlfriends/boyfriends were often cited as sources*

of both inspiration and support in the students' efforts to succeed. They appear to be an important source of the emotional security the students need to keep their efforts afloat. This personal security allowed students to move forward with their lives and to concentrate on things other than personal problems (Gregory, 1995).[114]

- Adolescents who *have satisfying and harmonious friendships* typically report positive self-esteem, a good understanding of other people's feelings, and relatively little loneliness (Mannarino, 1980).[115] Similar results are found for white and African-American youth, both middle income and lower income (Cauce, 1986; Coates, 1985).[116] Adolescents who have *satisfying and harmonious friendships* tend to be popular with their classmates, have positive views of them, and behave in ways that reflect advanced levels of social skills. A study of lower-income African-American seventh graders found that those who perceived their friends as supportive had more reciprocated friendships, were more popular with classmates, and were more often nominated by their peers as individuals who could successfully manage such social situations as arranging a double date or representing classmates in a meeting with teachers (Cauce, 1986).[117]
- Early adolescents engaged in *friendships* are more likely than those who are not to be altruistic, to dsplay affective perspective-taking skills, to score high on tests of intelligence, and to maintain positive peer status (Clark & Ayers, 1988; McGuire & Weisz, 1982).[118]
- Adolescents typically report that they enjoy their activities with friends more than any other (Csikszentmihalyi & Larson, 1984).[119] With friends, they feel that they are understood and can fully be themselves (Youniss & Smollar, 1985).[120] *Spending time with their friends—relaxing, playing sports, watching television—talking about themselves, other people, issues or events,* are moments that contribute to a generational sense of belonging with others who are respected and liked. Through interactions with friends, social skills such as the ability to empathize with and understand the point of view of others are learned and practiced (Rubin, 1980).[121]
- Adolescents typically describe their positive friendships with peers as involving *loyalty and intimacy.* Being loyal to one another, exhibiting *commitment and genuineness,* and placing value on self-disclosure are mentioned by adolescents as important features of intimate friendships (Berndt, 1981; Bigelow & La-Gaipa, 1980).[122] These friendships increase one another's self-esteem; provide information, emotional support, and advice; and help and support one another. Friends also contribute to an evolving sense of identity, of having a place in the world (Sullivan, 1953; Youniss, 1980).[123]
- One author concludes that physical appearance consistently correlates most highly with global self-esteem (Harter, 1989).[124] Peer social acceptance is the second most significant domain. Less influential are scholastic competence, athletic competence, and conduct (Elkind, 1984).[125]
- It is generally believed that skills learned in developing and maintaining friendships, such as showing intimacy, are further developed and expressed in *romantic involvements.* Dating has been viewed as serving a number of other developmental functions, some of which overlap with the benefits of friendship. An early review lists the four major functions of dating as entertainment, socialization, prestige enhancement, and courtship (Skipper & Nass 1966).[126] Additional functions served by these relationships include identity and pro-social development in that relating to someone else enhances sensitivity to and empathy with needs that are different from one's own (Sharabany, 1984).[127]
- Students whose *peer networks were preserved* over the transition to high school exhibited greater academic success, better adjustment, and fewer psychological problems in comparison to a control group that experienced the "usual procedures" that disrupt peer networks. Furthermore, a four-year follow-up revealed that twice as many control-group students as experimental-group students later dropped out (Felner & Adam, forthcoming; Felner, Ginter & Primavera, 1982).[128]

Ongoing Motivational Support

While emotional support provides a vital source of ongoing safety and affirmation to the young person, it is the addition of high expectations that motivates the young person to excel. It is also important

to remember that young people are young people. The research also shows that young people benefit when they are asked to abide by clear rules and standards and when they are guided and monitored. Much of the available research examines the motivational support offered by parents. However, it does appear that young people also benefit from high expectations and boundaries from adults in other settings, such as schools, and additionally, from a range of other adults, such as mentors, employers and the like. Consistency among adults in how they provide motivational support appears especially important.

The research also demonstrates that adolescents profit from clearly defined boundaries (e.g., rules, discipline, monitoring), but only when such boundaries are combined with nurturance and high expectations. Almost all of the available studies stem from research on the family. Parental efforts that promote development include:

- Clear structure and rules in the household
- Moderately strict parental discipline practices
- Approval, guidance, and absence of coercive control
- Limit-setting and negotiation
- Consistently enforced rules
- Monitoring (direct and indirect)

Parent Expectations

- Recent research indicates that the family plays an important role in the development of children's attitudes toward math, a significant determinant of the motivation to continue studying the subject. In particular, mothers (not teachers or fathers) are the critical socializers of sex differences in students' math attitudes and achievement. Mothers believe that math is harder for their daughters than for their sons and communicate this *low expectation or belief* to their children. This expectation then affects the students' likelihood of persevering in math (Eccles, 1984).[129] Other research indicates that *parental encouragement* strongly affects the decision to continue education after high school (Mare, 1980).[130]
- In this study, the sample was selected from the High School and Beyond study, a nationally representative sample of over 1,000 U.S. high schools in 1980. Within these schools, respondents were randomly selected from either the sophomore or senior class. The sample used here consists of all respondents who were sophomores in 1980, participated in the initial and three follow-up waves, and were either white, black, Mexican or Puerto Rican. The analyses focused on six positive outcomes. Four school engagement outcomes measure whether the respondent expects to be a college graduate, has at least a C+ average, has few late or absent days in school, and has a positive attitude toward school. The other two outcomes are referred to as measures of school achievement and indicate whether the respondent remained in school continuously and received a high school diploma or GED by the age of 21. The parenting variables are based on the respondent's perceptions of four school-related practices. Parental college aspirations indicated whether the respondent's mother has expressed the desire for him/her to complete college. The other inputs are monitoring the day-to-day progress of school work, a broad measure of parental supervision, and spending time talking to each other at least weekly. Analyses of the outcomes and inputs reveal that *parental college aspirations* and *general supervision* are positively associated with all six outcomes, *monitoring of school work* is associated with most outcomes, and talking with the child is associated with maintaining good grades and a positive attitude toward school. In addition, all four school engagement measures have positive effects on both achievement outcomes. The school engagement inputs were found to intervene between parenting practices and school achievement (Astone & McLanahan, 1991).[131]
- In this study, the authors explore the connection between social capital (the embeddedness of the family in social relationships with other families and community institutions) and successful development in young adulthood. By the 20-year follow-up interview in 1987, 252 children (18 to 21 years old at this time) of the teen mothers were in the sample. Net of the control variables, social capital inputs that increase the likelihood of young adults having a stable economic status in 1987 include: *mothers' educational aspirations for their children;* whether the mothers report a *strong help network;* mothers seeing a close friend weekly; and whether the young adults changed schools

frequently as adolescents. Measures of social capital do not predict early parenthood for girls, nor do they predict involvement in serious criminal activity for boys. Finally, social capital was not related to poor mental health in young adulthood (Furstenberg & Hughes, 1994).[132]

- One study demonstrated the correlation of parenting practices with children's motivation to achieve over time. For mothers, the salient parenting practices were *high expectations* and *consistent parenting* while for fathers only consistent fathering was related to high motivation to achieve. Sample subjects were 109 sixth grade boys, from primarily middle-class backgrounds (Wentzel, 1994).[133]

Teacher Expectations

- Many studies suggest that an important influence on achievement is the actions and attitudes teachers display in the classroom; the emphasis on academics, time spent on task, *teacher's expectations*, and classroom structure have all been related to differences in academic achievement (Rutter, 1983).[134] Evidence abounds for the connection between *high academic expectations* on the part of a whole school and student achievement (Stockard & Mayberry, 1992).[135] Among many others, Brookover et al. (1979)[136] found that frequent public rewards and *praise* helped create a more positive and productive learning environment. Minority adolescents, like those in the majority, learn best when *teachers combine warmth with challenging standards* (Baron, Tom & Cooper, 1985; Natriello & Dornbusch, 1984).[137]

- In a meta-analysis of many studies, Persell (1976)[138] reported that: teachers are more likely to hold negative expectations for lower-class and minority children than for middle-class and white children; *teacher expectations* are affected by testing and tracking, which are themselves biased against lower-class and minority children; this kind of negative information is more powerful in its consequences than positive expectations; and expectations are related to teacher behaviors and to student cognitive changes even after controlling for student IQ and achievement.

- Explanatory analyses reveal that the Catholic school advantage in student mathematics achievement is greatest among low social class schools. Compared to minority youth in public schools, minority youth in Catholic schools are at less of a disadvantage relative to whites, and social class differences as measured by achievement are greater in public schools, particularly within high social class public schools. Subsequent analyses indicate that *fair disciplinary practices* are associated with a reduction in minority group and social class differences while positive attitudes towards academics promote greater differences in achievement. The *interest and commitment of teachers significantly influences achievement*; therefore, in schools where staff problems exist, achievement is compromised among students in general (Lee & Bryk, 1989).[139]

- Much of the gender gap in mathematics that emerges in the secondary years may have its origins in family and classroom experiences several years earlier, although the specific linkages have yet to be spelled out. In elementary school, for example, boys' grades and test scores are the same as girls', but teachers make more academic contact with boys and spend more time with them in math (Leinhardt, Seewald & Engel, 1979).[140] *Teachers' and parents' attitudes favoring boys in math* in the early school years (Entwisle & Baker, 1983)[141] may account for boys' advantage in the secondary years (Eccles, Adler & Meece, 1984).[142]

Consistent Expectations from Multiple Adults

- The National Longitudinal Survey of Labor Market Experience-Young Men cohort serves as the data source for these analyses. This sample consists of 1,534 white and 711 African-American males between the ages of 14 and 17. The outcomes are educational attainment, occupational prestige and yearly earnings, outcomes measured at age 29. The main inputs are social capital factors, which include the presence of reading materials in the home at age 14, parental encouragement to continue education past high school, teacher encouragement to continue past high school, and residential stability as measured by whether the youth lived in the same county from birth to the first interview date. Analyses of occupational attainment reveal that *reading materials in the home, parental encouragement and teacher encouragement* are all associated with improved outcomes among white males. For black males

teacher encouragement and having two types of reading materials in the home are significantly associated with occupational achievement. A significant interaction effect indicates that teacher encouragement is more important for black males whose parents have less than a high school education than those with more educated parents. The association between social capital inputs and adult earnings is weak. However, compared to those who received no encouragement, black males who received much *teacher encouragement* have significantly higher adult yearly earnings (Brown, 1993).[143]

- Researchers found that participation in High/Scope Institute programs and other positive influences on youth were contributing factors in encouraging students to go on to post-secondary education. The study compared low to moderate achieving students who participated in High/Scope's program and students who did not. More than twice as many students in the program went on to college (65% of program group students versus 29% of the comparison group). The students who went on to college experienced the following positive influences: *positive parent expectations;* achievement in high school; having definite plans for completing higher education; and *having more positive role models or other school or community influential experiences,* particularly the High/Scope Institute program experiences (Oden, 1995).[144]

- Garmezy's review identifies three broad categories that consistently characterize invulnerable or resilient children across studies: (1) Dispositional and constitutional characteristics of the child; (b) the presence of a supportive family environment, including *parental warmth, cohesiveness, closeness, and order and organization;* and (c) a supportive individual or agency in the environment that provides the children with a *support system to aid in coping and positive models for identification* (Garmezy, 1983).[145]

- The impact of the negative appraisals from the wider society on the self-esteem of minority youth may be countered by *positive appraisals and high expectations* of peers, parents, teachers, and other members of the youth's community. In these domains—school, home, friends, sports—self-esteem may find positive expression and encouragement. Negative evaluations of one's group need not portend a poor self-concept for minority youth, for minority status is only one of many potential influences on the adolescent's sense of self (Arce, 1981; Barnes, 1980; Bownman & Howard, 1985; Semaj, 1985).[146]

- The study uses data from the National Longitudinal Survey of Young Women that consists of a nationally representative sample of 5,159 women who were between the ages of 14 and 24 in 1968. These analyses assess outcomes for women at age 27 and age 35. Social capital is a summary measure comprised of three items that pertain to investments in education: *(1) the amount of encouragement from the woman's mother and teacher for post-secondary education, (2) parental educational goals for the female respondent, and (3) the availability of reading materials in the home.* Outcome measures are high school completion, post-secondary education, labor force participation, financial resources, avoidance of poverty, and welfare avoidance. The salient relationship between social capital and educational outcomes exists net of background and risk variables. With the exception of mother's encouragement, social capital inputs significantly increase the likelihood of high school completion. However, the effects differ by risk status. For instance, the input parental goals increases the likelihood of high school completion more for high-risk women than low-risk women. Similarly, social capital inputs significantly increase the likelihood of pursuing post-secondary education. The effect of parental goals is particularly strong, and again the effect is greater for high-risk women. After background and risk characteristics were controlled, **none** of the social capital measures were found to be significant predictors of labor force participation, financial resources, or experiences with welfare avoidance. Overall, there is a strong association between these social capital inputs during youth and educational attainment in adulthood (Sugland, Blumenthal & Hyatt, 1993).[147]

Parental Monitoring

- The main independent variable in this study was the amount of time students spent in self-care, *without adult supervision,* after school. Students who took care of themselves for 11 or more hours a week were at twice the risk of

substance use (cigarettes, alcohol, marijuana) as those who did not take care of themselves at all. This held true regardless of socio-demographic status, extracurricular activities, sources of social influence, and stress. Subjects were 4,932 eighth-grade students from a wide range of racial and ethnic backgrounds and family structures (Richardson et al., 1989).[148]

- This study concludes that self-care after school did not increase the risk of problem behavior (substance use, risk taking, depressed mood, and lower academic grades) *if parents consistently monitored adolescent's whereabouts.* However, the risk increased if the adolescents were unsupervised **and** the parents inconsistently or never knew the adolescents' whereabouts. The more hours per week the adolescent remained unsupervised, the greater the risk of problem behavior. Among supervised teens parenting style had no effect on problem behaviors, but when students were unsupervised, those whose parents had permissive or unengaged styles were at considerably greater risk. Subjects were 3,993 ninth-grade students from a variety of ethnic backgrounds (Richardson et al., 1993).[149]

- One study examined adolescents' reported susceptibility to peer pressure to engage in antisocial activity. It found those students who were supervised by their parents at home after school were least susceptible, followed by adolescents who were home alone, then those at a friend's house, and finally, most susceptible were those adolescents who described themselves as "hanging out." However, regardless of the level of supervision after school, adolescents whose *parents knew their whereabouts* and those who had been raised with an authoritative parenting style were less susceptible to peer influence. The study used a heterogenous sample of 865 adolescents in grades 5-9 (Steinberg, 1986).[150]

- One study demonstrated that *high parental support* and three types of parental control *(low coercive control, high number of rules, and high level of parental monitoring)* were related to less adolescent drinking, less illicit drug use, fewer deviant activities, and less school misconduct. Parental monitoring was the best predictor. Parental monitoring and support were important predictors of adolescent outcomes even when critical demographic factors such as family structure, socioeconomic indicators, age, gender, and race of the adolescent were taken into account. This study had a general population sample of 699 adolescents aged 13-16 and their families. Black families were oversampled (Barnes & Farrell, 1992).[151]

- This study found that adolescents who abstained from sexual activity or who were sexually active but at low risk of pregnancy or sexually transmitted diseases received significantly higher levels of *parental support* and were *monitored* much more closely by parents than were high-risk sexually active teens. In addition, parents of low-risk, sexually active girls were more likely to have discussed birth control options with their daughters than were parents of girls in the other groups. Subjects were 2,567 adolescents aged 13 to 19 years of age living in a variety of family structures (Luster & Small, 1994).[152]

- A synthesis of ethnographic research found that parents who use stringent monitoring strategies help promote the development of positive outcomes associated with social mobility (characteristics of social mobility are defined as completing high school, foregoing or recovering from the negative effects of premature parenting, refraining from anti-social behaviors, and becoming economically independent) among low-income African-American youth. *Monitoring strategies (supervision techniques that include chaperonage, and monitoring the time, space, and friendships of adolescents)* represent an attempt to avoid neighborhood risks and access local and extra-local opportunities (Jarrett, 1995).[153]

- This analysis discovered that *parental monitoring* and two aspects of discipline (parental follow-up on commands and consistency of parenting style) were negatively correlated with two measures of delinquency: police contacts and self-reported delinquency. The monitoring score was the best predictor; the monitoring score also differentiated moderate offenders from persistent offenders. Subjects were 76 seventh-grade and 57 tenth-grade, primarily white boys and their parents (Patterson & Stouthamer-Loeber, 1984).[154]

- This study explored whether parenting styles in single-parent and step-parent families are different from those in families where two natural parents are present and whether school-related parenting practices are associated with

achievement. The sample was selected from the High School and Beyond study (HSB), a nationally representative sample of over 1,000 U.S. high schools in 1980. Analyses of the outcomes and inputs reveal that parental college aspirations and *general supervision* are positively associated with all six outcomes, *monitoring of school work* is associated with most outcomes, and *talking with the child* is associated with maintaining good grades and a positive attitude toward school. In addition, all four school engagement measures have positive effects on both achievement outcomes (Astone & McLanahan, 1991).[155]

Boundaries, Rules and Discipline

- In one longitudinal study, *clear structure and rules in the household*, representing an important support in childhood, reduced the likelihood of youths committing delinquent offenses even in delinquency-prone environments (Werner & Smith, 1992).[156]

- In this study, the families of adolescents were classified into one of four parenting styles based on acceptance/involvement and strictness/supervision dimensions. Adolescents who characterized their parents as *authoritative (i.e., those with high levels of both acceptance and strictness dimensions)* scored highest on measures of psychosocial competence (e.g., work orientation, school orientation, academic competence) and lowest on measures of psychological and behavioral dysfunction (e.g., school misconduct); the reverse was true for adolescents who described their parents as neglectful. Adolescents whose parents were characterized as authoritarian scored reasonably well on measures indexing obedience and conformity to the standards of adults, but had relatively poorer self-conceptions than other youngsters. Adolescents from indulgent homes demonstrated a strong sense of self-confidence, but reported a higher frequency of substance abuse and school misconduct and were less engaged in school. The sample, which consisted of 4,081 ninth through twelfth grade students, was a heterogeneous one in terms of ethnicity, parental education levels, and family structure (Lamborn et al., 1991).[157]

- This research found that *authoritative parenting* facilitated adolescent academic success and that each component of authoritativeness studied *(acceptance, psychological autonomy, and behavioral control)* made an independent contribution to achievement. Adolescents whose parents treat them warmly, democratically, and firmly are more likely than their peers to develop positive attitudes toward, and beliefs about, their achievement, and as a consequence, they are more likely to do better in school. The sample was composed of 120 families with a firstborn child between the ages of 11 and 16. The sample was predominately white, socioeconomically heterogeneous, and from a variety of family structures (Steinberg, Elmen & Mounts, 1989).[158] Results from other studies support the conclusion that authoritative parenting and limit setting, with negotiation, also predicts greater autonomy in adolescents (Hill, 1980; Hill, 1987[159]; Grotevant & Cooper, 1986).[160]

- In one study, *an authoritative* parenting style was positively associated with grades while both authoritarian and permissive parenting styles were negatively associated with grades. Authoritarian parenting had a stronger association (negative) with grades than did the other parenting styles. The full typology best predicted grades among white students. Pure authoritative families had the highest mean grades, while inconsistent families that combined authoritarian parenting with other styles had the lowest grades. Subjects were 7,836 high school students (ages 14-18) from a wide range of ethnic, parental education, and family structural backgrounds (Dornbusch et al., 1987).[161]

- One study found that adolescent perceptions of parental strictness and rules showed a curvilinear relationship with their sexual attitudes and behavior. Sexual permissiveness and intercourse experience was highest among teens who viewed their parents as not being strict at all or not having any rules, lowest among those who reported that their *parents were moderately strict*, and intermediate among adolescents who perceived their parents as very strict and having many rules. The sample was a nonrandom availability sample of 2,373 students in two cohorts. Most subjects were white and between 15 and 18 years old; a high proportion of the sample was Mormon (Miller et al., 1986).[162]

- A year follow-up to a study reported in Lamborn, Mounts, Steinberg and Dornbusch (1991) found that differences in adjustment (i.e., psy-

chosocial development, school achievement, internalized distress, and behavior problems) associated with variations in parenting style are either maintained or increase over time. The benefits of *authoritative parenting* are largely in the maintenance of previous levels of high adjustment while the deleterious consequences of neglectful parenting continue to accumulate. Approximately 2,300 students in grades 9 through 12 from a wide range of ethnic and socioeconomic backgrounds and different family structures comprised the sample (Steinberg et al., 1994).[163]

- A meta-analysis of 47 studies (21 of which were on children aged 6 and older) in which there was a relationship between parental caregiving and child externalizing (i.e., aggressive, hostile, and non-compliant) behavior found several caregiving variables—*approval, guidance, motivational strategies, synchrony, and absence of coercive control*—that were negatively associated with child externalizing behavior. Further, the findings suggested that a pattern of caregiving involving **all** of these variables was especially predictive. The study concludes that this pattern describes aspects of a larger construct that they call "acceptance-responsiveness" (Rothbaum & Weiz, 1994).[164]

- In one study, "ineffective discipline" was characterized by "nagging, scolding, negative reinforcement of the child's troublesome behavior, anger, and a sense of being unable to control the child." Ineffective discipline was highly correlated with antisocial behavior in the sixth grade as reported by teachers, parents and children. Ineffective discipline during the seventh grade also had a direct, negative effect on boys' seventh-grade academic engagement which, in turn, had a direct effect on eighth grade academic achievement. The authors state that low scores on the ineffective discipline construct "indicate a *consistent, rational, and non-punitive style of parental control* that has been described as central to the authoritative parenting style." Subjects were 206 boys (in two cohorts) and their families, primarily working with lower-class whites (Debaryshe, Patterson & Capaldi, 1933).[165]

- It is reported that *consistently enforced rules, good supervision, and well-balanced discipline* combined with a supportive, understanding relationship are key determinants of resilient behavior (Hauser et al., 1985).[166]

- Demanding parents expect mature behavior from their adolescent, set and consistently enforce reasonable rules and standards for behavior, and when necessary discipline their youngster firmly yet fairly. The constellation of *warmth, psychological autonomy, and demandingness*, first identified and described by Baumrind (1967),[167] has been labeled *authoritative*. Adolescents who grow up in authoritative homes score higher on indexes of psychological development and mental health, however they are defined (Hill, 1980; Macoby & Martin, 1983).[168]

Strategic Support

There is only so much parents can do to support the development of their children. Ultimately, parents need assistance from other adults in the community, especially as the young person gains a greater degree of autonomy. Indeed, available research indicates that young people derive positive benefits when they and/or their parents are involved in larger social networks. Social networks combine both familial and non-familial adults and include people such as grandmothers, older siblings, pastors, school teachers, neighbors, youth workers and fictive kin.

There are many types of extended families and social networks, and they serve different functions for different young people. For youth living in high-risk settings, social networks play an especially important role in that they provide the young person with the connections and access to vital information typically afforded to more advantaged populations. The influence of social networks stems from their ability to provide the young person with:

- Additional adult care, concern and role models
- Access to resources—institutional, economic and social
- Access to channels of information and advice
- Home-school linkages
- Complementary types of support and assistance from adults
- Access to resource-rich communities, personal connections and jobs
- Opportunities to participate in varied activities

Family

- Theoretically we would expect interactive social supports to be a key determinant of health and well-being during adolescence, since *social support provides emotional sustenance, informational guidance, and tangible assistance.* Potential sources of positive social support for youth are found to include parents, siblings, adults outside the home, and peers (Holahan & Moos, 1985; Peterson & Spiga, 1982).[169]

- In a longitudinal study of children born to low income, predominantly African-American teenage mothers in Baltimore, Furstenberg and Crawford (1978)[170] brought attention to the importance of *positive and supportive extra-familial relationships* and transactions as key to successful adolescent development. Furstenberg (1993)[171] has continued and refined these findings with his work in Philadelphia, in which the value of community supports in shaping family management practices is emphasized. Research indicates that African-American adolescent mothers in *extended families* are more likely to remain in school than their peers who lack this support and are less likely to rely on welfare (Colletta & Lee, 1983; Furstenberg & Crawford, 1978).[172]

- Researchers examined several measures of access in relation to youth employment. They use data from the 1980 Census and include black and white youth between the ages of 16 and 19 living with at least one parent within 47 of the 50 largest Metropolitan Statistical Areas. Inputs include access to information through family members, access based on employment concentration (job availability), and spatial access, which encompasses both access made available through public and private transportation (average commute time) and more broadly social access, or the absence of social isolation. Findings suggest that *information access* increases the probability of employment. Having an employed parent or sibling increases the probability of employment among youth. In addition, youth are likely to work in the same industry as their parent, to work near the location of their parent's job and to use the same commute mode. Analyses that examine job availability and spatial access measures as predictors of unemployment indicate that *social isolation* is the only significant predictor of overall unemployment among black youth. And, low employment concentration and social isolation are important predictors of unemployment among central-city black youth (O'Regan & Quigley, 1991).[173]

- This study focuses on the relationship between kinship support and adolescents' well-being. The sample is comprised of 70 male and 95 female African-American adolescents in grades 9 through 12, attending a large, predominantly African-American public high school in a large Northeastern city. Sixty percent of the sample are from low socioeconomic status homes; 49 percent are from single-parent, female-headed households. The authors examine several outcomes at the time of the 20-year follow-up (1987) that are related to success in early adulthood: obtaining a high school diploma or GED; enrollment in college; participation in the labor force in the past three months; reporting a live birth before the age of 19 (girls only); involvement in serious criminal activity (boys only); and depression. Measures of social capital were collected in 1984. Several background variables such as mothers' educational level; the economic position of the family; and the youths' status on the outcome variables in 1984 were used as controls. The authors include the following measures of adolescent well-being as "outcome" measures: self-reliance, problem behavior, and psychological distress. The inputs that are examined are kinship support (frequency of contact with adult relatives; number of relatives living within an hour of the adolescents' home; degree of social and emotional support offered by adult relatives) and parenting practices. The adolescents' age, gender, and socioeconomic status are used as control variables. Results indicate that there are family structure differences in the relationship between kinship support and adolescent well-being. In single-parent families, adolescents who report *more kinship support* are more self-reliant and report fewer problem behaviors than those adolescents with less kinship support. Kinship support was not related to psychological distress in adolescents from single-parent families. For adolescents in two-parent families, kinship support was not related to any of the adjustment measures (Taylor, Casten, & Flickinger, 1993).[174]

- Studies of black children from inner-city ghettos have distinguished key differences between

resilient and non-resilient children. The family environments of the resilient adolescents were neat and not cluttered; books were available, and family relationships were described as *warm and cohesive*. If the mother headed a single-parent home, she was actively concerned about her child's competency; she helped with homework; and she recognized and reinforced the child's goals, interests, and striving toward self-direction. While at least one significant positive *role model was present in the lives of all of these resilient youth, the number of additional caretakers or social supports was particularly influential in single-parent households* (Garmezy, 1984).[175]

- One study found that adolescents whose mothers report fewer behavior problems are less likely to have mothers who expressed their appreciation for their children; are more likely to have families who discussed television programs; and are less likely to have been spanked in the week prior to the 1988 survey than those adolescents whose mothers report more behavior problems. With regard to adolescent-reported behavior problems, those youth who report fewer problems are more likely to have mothers who *expressed their appreciation for their children*; are more likely to have families who *discussed television programs;* are less likely to have *discussions about sex* with their parents; and are less likely to have been spanked in the week prior to the 1988 survey that those adolescents who report more behavior problems (Morrison & Glei, 1993).[176]

- In studies of low-income African-American youth, families who engage in restricted family-community relations were found to promote the social mobility of their children (e.g., completing high school, foregoing or recovering from the negative effects of premature parenting, refraining from anti-social behaviors, and becoming economically independent). Parents, in an effort to curtail relationships with particular families and individuals, *erect both physical and symbolic barriers*. Adults in defended families identify residents whose lifestyles differ from theirs, avoiding them as a means of maintaining family and household integrity (Jarrett, 1995).[177]

- In a 14-year study of 94 females who had been abused or abandoned as children, and placed in an orphanage by age 5, about one-third were viewed as "doing perfectly fine" as adults (Quinton, Rutter & Liddle, 1984).[178] The key difference between these functioning adults and their less successful counterparts was in their learned ability to plan for their futures. This ability was nurtured through their developmental years through the influence of a *caring, supportive adoptive family* and was also associated with growing feelings of self-worth and self-efficacy both in the home and at school. *Planning was reinforced* through the feelings that what these young women decided and did would have some influence on their futures.

- One study using data drawn from the National Survey of Family Growth examined a representative sample of women aged 15 to 44; to assess factors that contribute to the likelihood that a young woman will initiate sexual activity before the age of 19 and use contraception and choose an alternative to parenthood (adoption or abortion). Several family characteristics are significantly related to the probability of initiating sexual activity. These include: race, religious affiliation, residence, mother's education, age of adolescents, and family income. *Parent-adolescent communication* about how pregnancy occurs was not related to the probability that adolescents will abstain from sexual activity. In addition, parent-adolescent communication about contraceptive methods, religious affiliation, and age of the adolescent have a significant influence on predicting contraceptive use (Casper, 1990).[179]

- This study tests the relationship between parent-adolescent communication, parental supervision, and parental attitudes and adolescent sexual activity. Data for the study are drawn from the second wave (1981) of the National Survey of Children, a nationally representative longitudinal sample. Results indicate that *parental supervision or communication* alone does not have a substantial effect on the occurrence of early sexual activity among adolescents. Further analyses examine parental attitudes toward marriage and family life. Only 9 percent of girls whose parents express *traditional attitudes* report having had sex compared to 20 percent of girls whose parents hold more liberal attitudes. For boys, parental attitudes are not related to the occurrence of sexual activity. In addition, among girls whose parents hold traditional attitudes toward family life and marriage, those whose *parents discuss televi-*

sion programs with them as well as those who have at least one *parent who discusses sex* with them are less likely to report sexual activity. For girls whose parents express more liberal attitudes, none of the inputs are significantly related to differences in rates of sexual activity. For boys with more traditional parents, having parents who discuss sex with their sons is associated with a higher rate of sexual activity. However, boys with more traditional parents who report that their *parents listen to and discuss decisions* with them report a lower incidence of sexual activity. Among boys with more liberal parents, those who live in very good neighborhoods are less likely to be sexually experienced. The authors suggest that parents, especially traditional ones, do not discuss sexual activity with their sons before they become sexually active (Moore, Peterson & Furstenberg, 1986).[180]

Social Networks

- In this analysis, the employment of *supportive adult network structures* by families of low-income African-American youth promotes the development of positive outcomes that are associated with social mobility (completing high school, foregoing or recovering from the negative effects of premature parenting, refraining from antisocial behaviors, and becoming economically independent). Parents' ability to provide broader opportunities for youth derives from their embeddedness in extended, often socioeconomically heterogeneous, kinship networks. Linked by kinship and friendship ties, various adults, such as grandmothers, older siblings, godparents, neighbors, and biological or fictive kin, furnish young people with *additional care, concern, and resources*. Caregivers who live in resource-poor communities, by virtue of their network ties to "better-off" kin, have access to resource-rich communities with a wider array of institutional, informational, and economic assets (Jarrett, 1995).[181]

- In this report, the authors explore the connection between social capital (the embeddedness of the family in social relationships with other families and community institutions) and successful development in young adulthood. By the 20-year follow-up interview in 1987, 252 children (18 to 21 years old at this time) of the teen mothers were in the sample. Net of the control variables, social capital inputs that increase the likelihood of young adults having a stable economic status in 1987 include: mothers' educational aspirations for their children; *whether the mothers report a strong help network; mothers seeing a close friend weekly;* and whether the young adults changed schools frequently as adolescents. Measures of social capital do not predict early parenthood for girls, nor do they predict involvement in serious criminal activity for boys. Finally, social capital was not related to poor mental health in young adulthood (Furstenberg & Hughes, 1994).[182]

- In a synthesis of ethnographic research, it was found that *parents who build strategic alliances with mobility enhancing institutions and organizations* promote the social mobility (characteristics of social mobility are defined as completing high school, foregoing or recovering from the negative effects of premature parenting, refraining from antisocial behaviors, and becoming economically independent) of low-income African-American youth. Identification and involvement in such institutions, particularly churches and schools, provide youth with the *opportunity to participate in activities that link young people into broader social opportunities or networks, either through tangible skills or personal connections* (Jarrett, 1995).[183]

- There is a tendency for parents to withdraw from school affairs after their children have left elementary school, but *parent involvement* affects school performance in a positive fashion regardless of age. Considerable research shows that parents' participation increases student achievement at all levels (Epstein, 1987).[184] African-American parents' interest in and *knowledgeability about the school* appear to help, as do parental efforts to instill an *awareness of racial barriers* in black youth (Bowman & Howard, 1985; Scheinfeld, 1983).[185]

- This study looks at the relationship between indicators of family strengths and youth outcomes in a large representative sample (13,014) of U.S. households in 1987. Of those households, 2,300 contain an adolescent between the ages of 12 and 18. Behavior problems, delinquent behavior, and parent-adolescent conflict are included as measures of well-being. A *higher level of parental involvement in youth organizations,*

more parent-child time together, more parent encouragement of independence, and less parental depression are associated with lower adolescent behavior problems scores, above and beyond the background characteristics. With regard to adolescent delinquent behavior, more church involvement, more parent-child time together, and higher parental commitment to family are associated with lower levels of delinquent behavior, net of background characteristics. Finally, parents who encourage independence in their children and are less depressed report lower levels of parent-child conflict, above and beyond background characteristics (Brown, 1993).[186]

- This study finds that adolescents' reports of both maternal and paternal demandingness and responsiveness predicted school grades. They also find that *adolescents who perceived their parents as being more involved (i.e., having high achievement values, being interested in schoolwork, and being more involved in school functions)* had higher grades in school and that these measures of parental involvement significantly predicted achievement above and beyond the assessed dimensions of parenting style. Subjects were 247 ninth grade students and their parents from two parent families. Subjects were heterogeneous in terms of socioeconomic status, type of community (urban, suburban, and rural) and ethnic/racial categories (Paulson, 1994).[187]

- This study was designed to assess the direct effects of parental involvement, homework time, and TV viewing time on academic achievement and to determine the extent of any indirect effects of parental involvement on achievement through homework and TV time. The sample consists of 28,051 high school seniors selected from the High School and Beyond Longitudinal Study. Analyses indicate that ability has the strongest direct influence on achievement among high school seniors. The second most important effect on achievement is from *homework*. The effects of TV viewing and parental involvement are both extremely small and insignificant. Additional analyses reveal that the strongest effect on homework is ability and the second strongest effect is *parental involvement*. There is a small but significant effect of parental involvement on achievement through homework (Keith et al., 1986).[188]

- This study examines the relationship between school-related parental involvement and positive school outcomes. The analyses are based on data from the School Safety and Discipline Component of the National Household Education Survey of 1993, sponsored by the National Center for Education. Findings reveal that among students in grades 6 through 12, *high parental involvement* is associated with a low incidence of grade repetition, school suspension, and behavior problems and a high incidence of student participation in school-related voluntary group activities, such as sports teams, band, and student government. Controlling for family, school, and student characteristics, parental involvement was found to be the most important predictor of student participation in school-related voluntary activities. In addition, parental involvement was one of the most important predictors of student suspension and student participation in out-of-school activities. As parental involvement increases the likelihood of student suspension decreases and the likelihood of out-of-school participation increases (Zill & Nord, 1994).[189]

Unrelated Adults

- One study, comparing the children of psychotic mothers to those of normal controls, found that the most competent children of psychotic mothers were far more "competent, colorful, creative, and talented" than those from the control group. The strongest predictor of which children became "super-competent" was whether or not they had a warm, supportive relationship with their mother. These highly competent children also more frequently reported having an *intense supportive relationship with an unrelated adult, had more intimate relationships with peers,* showed better mental health, and had more interesting hobbies and vocations than did those from the control group (Kauffman et al., 1979).[190]

- One longitudinal study found that spending time and developing relationships with *caring adults outside the family circle* enabled children with parents having psychopathology to detach themselves from these negative family influences and develop a stronger sense of personal autonomy and identity (Werner & Smith, 1992).[191]

- Social capital refers to the amount and quality of relations among individuals, including the

strength of social networks, sense of obligation and trust, access to channels of information, and active norms and sanctions. Coleman and Hoffer (1987)[192] and Kachel (1989)[193] show the important influence social capital has on student achievement. The community can provide support for the adolescent as well. The quality of the school and the extent to which the teachers and guidance counselors are involved with the students can be extremely influential. An external support system encourages and reinforces a teenager's coping efforts while demonstrating positive values (Rutter, 1979).[194] Resilient adolescents often *have extensive contacts outside the immediate family with concerned and caring ministers, teachers, and older friends,* as well as peers (Hauser et al., 1985; Werner & Smith, 1982).[195]

Conclusions

This literature review was based on the assertion that "at-risk youth" are in danger because they do not receive the ongoing and essential developmental experiences—be they in the home, the school, or the community—that make up the lives of young people from more advantaged situations. This assertion led to the question: *What are the experiences that help a young person pass successfully through adolescence and into young adulthood and which result in the young person acquiring desirable behaviors, attitudes, and skills?* Our expectation and hope is that as this question is asked and answered, community leaders and practitioners will then be in a better position to enact policies and programs aimed at:

- Helping young people to choose not to engage in problem behaviors, such as drug and alcohol use, delinquency, and early sexual activity.
- Helping young people to acquire a positive sense of self and connections and commitments to others, as well as the demonstrated ability and motivation to "achieve one's potential" in home, school and community settings.
- Helping young people to successfully achieve the "endpoints" of a successful transition to young adulthood: Graduation from high school, stable employment and/or attendance in post-secondary education.

From this literature review, we offer four conclusions.

- *On a day-to-day basis, young people benefit from opportunities.* Young people require the ongoing opportunity to be active learners, learners who are challenged to practice higher-order thinking skills, to reflect on knowledge, and to use their knowledge in different situations. Active learning, the research indicates, is most beneficial to young people when it occurs in context, but only when the context offers the adolescent the opportunity to engage in "new" roles and responsibilities that are perceived as relevant by the young person. Active learning and practice contributes to positive youth outcomes when it occurs in the contexts of group membership, especially when the adolescent has no opportunity to contribute to and influence the setting.
- *On a day-to-day basis, young people benefit from supports.* Supports are what allow adolescents to take advantage of the opportunities that exist in their lives. The clearest evidence highlights the importance of nurturance and high expectations. Nurturance and high expectations are probably the foundation of youth development, but the research indicates also that adolescents benefit most when it is offered in combination with clear boundaries, rules, and supervision. Finally, young people need strategic support, in the form of access to resources, information, and people who are able and willing to champion the adolescent to the outside world.
- *Opportunities and supports, both individually and collectively, are associated with a full continuum of youth outcomes—problem prevention, development and achievement.* There is not a one-to-one correspondence between a specific opportunity or support and a specific youth outcome. The opportunity to engage in active learning, for example, is related to lower incidence of problem behaviors, higher school achievement, and stronger sense of self-worth. On a daily basis, opportunities and supports probably derive their most power when experienced by young people in combination with each other.
- Opportunities and supports are beneficial to young people, in a manner almost independent of who provides them or where they exist. Legitimate opportunities and supports can exist in each of the primary settings where the young person lives—homes, schools, peer groups—and can have a positive impact on develop-

ment. Moreover, beneficial supports and opportunities exist in additional settings—extended families, social networks, youth organizations and religious organizations.*

Our hope is that this literature review offers "justification" for the continued goal of providing young people with legitimate opportunities and supports. These opportunities and supports can, and should, be incorporated into existing and new systems and programs. *Collectively, these studies indicate that when young people are provided with a range of challenging opportunities and when they receive ongoing support to succeed in those opportunities, then youth are more likely to achieve a full continuum of desirable youth outcomes.* That is, each of the different types of opportunities and supports is associated with a wide range of desirable youth outcomes—not only the absence of behavioral and emotional problems, but equally important, the acquisition of developmental outcomes, school achievement and work readiness.

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* These conclusions are addressed more fully in our companion document, "Opportunities and Supports for Youth Development: Lessons from Research and Implications for Community Leaders and Scholars."

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How Schools Can Foster Resiliency in Children

By Bethann Berliner and Bonnie Benard, West Ed

One of the greatest challenges facing today's district-level policymakers and educational leaders is helping America's youth avoid adverse outcomes such as school failure, substance abuse, teen pregnancy, and delinquency. This article provides a conceptual tool for rethinking the way solutions are framed and thus how these problems are best addressed.

At its heart is the notion of resiliency: the potential for youth to develop into healthy, productive, competent adults despite experiences of severe stress and adversity.

Traditional prevention efforts have focused almost exclusively on identifying the so-called risk factors in a child's life (poverty, abuse, and community violence, for example) and then attempting to provide services that would eliminate or mitigate those conditions. While no one disputes the urgent need to improve conditions for many of America's children, the approach has inherent limitations, chief among them the labeling of children as "at risk," which often results in lowered expectations based on a child's perceived deficits. Moreover, identifying the risks in a child's environment does not necessarily result in introduction of appropriate services or in successful mitigation.

By contrast, the notion of resiliency emerges from a focus on the positive aspects of a child's life rather than the negatives. Resiliency has long been associated with surviving trauma and other stressful life events. To better understand the phenomenon, a number of researchers have opted to look not at why some children succumb to the negative influences of their environments but why other children thrive despite the same general conditions. Rather than identifying the risk factors contributing to failure, researchers have identified some common "protective factors" that help youth survive risky environments.

Their findings argue for the development of policies and programs that aim by design to foster resiliency in children and youth. In the realm of education, there is emerging consensus that this can best be achieved by enacting policies that build upon the strengths and life experiences of children and youth, their families, and their communities.

For decades, scholars and practitioners from psychiatry, anthropology, education, sociology, psychology and, more recently, prevention, have described the successful adaptation and transformation of children and youth who confronted high-risk situations and extreme adversity. Their studies, many of them cross-cultural, have looked at children and youth who have grown up in a variety of adverse conditions, including concentration camp internment; abusive, criminal, or substance-abusing parents; poverty; and gang participation. From these studies—several of which followed youth well into their adult years—emerges one consistent finding: nearly two-thirds of those studied did *not* develop high-risk behaviors. What was unique about these individuals? Collectively, these studies yield an understanding both of the personal traits possessed by these resilient children and youth and of the environmental characteristics that fostered or reinforced those traits well into their adult lives.

The personal traits commonly associated with children and youth who overcome risks in their lives are:

- Social competence: The ability to establish and sustain positive, caring relationships; to maintain a sense of humor; and to communicate compassion and empathy.
- Resourcefulness: The ability to critically, creatively, and reflectively make decisions; to seek help from others; and to recognize alternative ways to solve problems and resolve conflict.
- Autonomy: The ability to act independently and exert some control over one's environ-

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ment; to have a sense of one's identity; and to detach from others engaged in risky or dysfunctional behaviors.

- Sense of purpose: The ability to foresee a bright future for oneself; to be optimistic; and to aspire toward educational and personal achievement.

The research shows that these traits, which make up an individual's resilient nature, are fostered or reinforced by caring relationships that are trusting, compassionate, and respectful; high expectations that are explicitly communicated and adequately supported; and meaningful opportunities for engaging in valued family, school, and civic activities.

The rationale for formulating educational policy with an eye on resiliency is compelling. Research shows that the link between the protective factors in a child's environment and the child's healthy development, social success, and good academic outcomes is stronger than the link between specific risk factors and negative outcomes. Moreover, risk-focused policies label children and youth as deficient, tracking them as consumers of needed services rather than as producers of their own well-being. The emerging understanding of resiliency offers educational policymakers a new paradigm for formulating policies rich in possibilities for America's youth.

Clearly, the greater the number of positive relationships or experiences in children's lives, the greater their chances of overcoming adversity. Yet resiliency research reveals that just one positive relationship, whether at home, in the community, or at school, can make a major difference for a child whose life is otherwise traumatic. So while district-level policymakers may have little influence on what goes on in a child's home or in the larger community, they can adopt policies ensuring that a child's school relationships and experiences contribute to his or her resiliency.

Educational Practices

What follows is a discussion of some of the many research-based educational practices that foster resiliency. As shown in the table below, a new envi-

Moving Schools from Risk to Resiliency

Risk Focus:

Relationships are hierarchical, blaming, controlling.

Curriculum is fragmented, non-experiential, limited, and exclusive of multiple perspectives.

Instruction focuses on a narrow range of learning styles, builds from perceptions of student deficits, and is authoritarian.

Grouping is tracked by perceptions of ability; promotes individual competition and a sense of alienation.

Evaluation focuses on a limited range of intelligences, utilizes only standardized tests, and assumes only one correct answer.

Resiliency Focus:

Relationships are caring and promote positive expectations and participation.

Curriculum is thematic, experiential, challenging, comprehensive, and inclusive of multiple perspectives.

Instruction focuses on a broad range of learning styles; builds from perceptions of student strengths, interests, and experiences; and is participatory and facilitative.

Grouping is not tracked by perceptions of ability; promotes cooperation, shared responsibility, and a sense of belonging.

Evaluation focuses on multiple intelligences, utilizes authentic assessments, and fosters self-reflection.

ronment is created when schools move from a risk focus to a resiliency focus in teaching, learning, and leadership practices, as well as in the nature of relationships among and between students, parents, and teachers.

1. Foremost in this type of learning environment is educators' recognition that schooling is about caring and respectful relationships. Students' motivation to participate actively in learning activities and to achieve academic success is clearly linked to strong support from teachers, involvement by parents, and cooperative activities among students. Schools in your district can foster resilience through relationships by:

- Supporting teacher collaboration. Giving teachers the time and opportunity to work collegially correlates directly with student achievement.
- Limiting the number of students in each class. Smaller class size is associated with establishing close personal and working relationships.
- Increasing opportunities for parents to be involved in the school community. This can reduce absenteeism and behavior problems as well as increase school-family communication, student motivation, and achievement.
- Encouraging the use of peer learning activities. Mixed-ability and other small cooperative learning groups, including the restructuring of large schools into smaller families of learners, promote relationships among students in which everyone contributes to the learning process.

2. Curriculum should be designed with an understanding of the various ways children and youth learn, and it should build upon what they already know and are interested in. Activities can be integrated across multiple subject areas and can allow students to discover answers through inquiry, experimentation, and discussion. Schools in your district can foster resiliency through curriculum by:

- Supporting curricular enrichment opportunities such as art, music, vocational training, school-based enterprise, apprenticeship, and community service for all students. Experiential learning encourages students to express their creativity as well as contribute to the well-being of others.
- Promoting a curriculum that values racial, ethnic, and linguistic diversity and promotes gender and cultural equity. Giving voice and recognition to multiple perspectives is fundamental to sustaining a democratic society.
- Resisting efforts to "dumb down" learning activities. Having and conveying high expectations for learning are associated with higher levels of achievement.

3. The instructional strategies teachers use, whether lecture, drill, discussion, or discovery, send powerful messages to students about how they are to learn the material and who possesses the knowledge. Schools in your district can foster resilience through instruction by:

- Promoting increased opportunities for teachers to facilitate lessons rather than to teach didactically. Facilitative instruction is associated with motivating students to learn and helping them develop a sense of responsibility for their own learning.
- Supporting teachers' efforts to individualize instructional strategies to accommodate the broad range of student learning styles, life experiences, and personal strengths and interests. Varying instructional strategies can make learning an engaging and meaningful process that builds upon every child's strengths and fosters every child's success.

4. The way schools track and group students by perceived abilities tells students what's expected of them. Educational practices such as remedial "pull-out" sections or homogeneous grouping can create negative labels for students assigned to low-ability groups—labels that often become self-fulfilling prophecies in terms of academic and developmental outcomes. Schools in your district can help foster resiliency through grouping practices that include:

- Ensuring inclusionary group practices such as mainstreaming, cooperative learning, and peer tutoring. These practices are associated with academic improvement; social benefits such as lower rates of vandalism, drug and alcohol referrals, and school dropouts; and personal gains in confidence and relationships.

5. Standardized tests usually assess only one or two areas of student knowledge, and they do so imperfectly, relying on test items that lack a mean-

ingful context. More authentic assessments link learning and acquisition of knowledge to contexts and experiences that are relevant to students' lives. Schools in your district can foster resiliency through evaluation by:

- Supporting teachers' use of various types of performance assessments. Teachers may infer more about student knowledge from portfolios or demonstrations than from standardized tests, and these assessment tools give students opportunities to demonstrate what they learn in meaningful ways.
- Encouraging students to develop personal assessment skills such as self-reflection and to participate in their own performance reviews. Including students in the evaluation of their academic accomplishments encourages them to take responsibility for their learning.

A Policymaker's Imperative

These are troubling times for policymakers. With the electorate clamoring for solutions to seemingly intractable social problems, policymakers must find or develop effective tools for long-lasting solutions. And they must do so in exceptionally tight fiscal times. As we approach the 21st century, demands upon federal and state budgets continue to outpace revenues, further stretching already thin discretionary budgets such as education.

To meet their imperative, educational policymakers need timely, accurate, objective, and research-based information. To be effective, educational policies must not only be comprehensive and practical to implement, but they also must promote a combination of strategies and must contribute to positive developmental and academic outcomes for children and youth.

The findings from resiliency research offer a new paradigm for defining problems and framing solutions. This paradigm emphasizes caring, support, and high expectations for youth, as well as opportunities for meaningful participation in school and civic activities. It is also a paradigm that relies on changing existing beliefs and practices. The notion of resiliency brings more than a message of hope; it brings the real possibility for positive developmental and academic outcomes for all children and youth.

Resources

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Preventing Substance Abuse

by J. David Hawkins, Michael W. Arthur, and Richard F. Catalano,
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In the United States today, fewer people are using illegal drugs than a decade ago. Yet, more people are being arrested and incarcerated for drug-related offenses and admitted to treatment and emergency rooms for drug-related crises now than ten years ago. These observations underscore the complexity of the problem of drug abuse and efforts to prevent it in a free society. While it appears that some of the tactics employed in the "War on Drugs" declared by the U.S. government during the 1980s may have been successful at reducing the prevalence of illicit drug use among high school students and the general population, there is less evidence of a reduction in the number of alcoholics, addicts, and drug abusers in the United States.

Since the early 1980s the U.S. government has adopted policies designed to reduce the availability of certain drugs through law enforcement and interdiction (supply reduction), whereas many Western European countries and Canada have concentrated more on reducing the negative consequences of drug abuse (harm reduction) (Reuter, Falco, and MacCoun 1993). The U.S. government's "War on Drugs" resulted in a tremendous expansion of resources applied to supply reduction and interdiction efforts focused on illegal drugs and in increasingly harsh criminal sanctions against users, including those caught in possession of relatively small amounts of illegal drugs. These policies have apparently had little effect on the availability of addictive drugs or on reducing abuse. They have also fueled higher costs associated with prison construction and a tremendous increase in the prison population, leading some to call for legalization of currently proscribed drugs such as marijuana and cocaine.

Recognition of the costs of substance abuse and of the costs and limitation of both supply reduction efforts and drug abuse treatment has also stimulated interest in preventive approaches focused on reducing demand for drugs. School-based prevention programs have flourished since the 1970s, providing students with information about the negative effects of drug abuse, promoting self-esteem and self-awareness, and teaching skills for social problem solving and for resisting social influences to use drugs. Methodological issues and challenges have weakened evaluations of many of these interventions (Gerstein and Green 1993). Where rigorous evaluations of these drug abuse prevention programs have been mounted, the evidence for effectiveness has usually been weak (Bangert-Drowns 1988; Moskowitz 1989), although it has been consistent with the hypothesis that the early initiation of tobacco, alcohol, and marijuana use can be prevented by school-based programs that emphasize the creation of social norms antithetical to use (Hansen and Graham 1991) and the development of skills to resist drug offers (Ellickson and Bell 1990).

Concurrently, researchers concerned with the health consequences of alcohol and tobacco use have investigated the effects of laws and regulatory mechanisms for reducing consumption of those substances that can be legally possessed and used by adults. High taxes on alcohol, legal restrictions on age of purchase, and outlet licensing restrictions have been shown to be effective in reducing rates of consumption of alcohol as well as negative consequences of alcohol use, including cirrhosis rates and

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drinking and driving among 18- to 20-year-olds, suggesting that legal regulation remains an important tool in drug abuse prevention for "legal" drugs.

Both epidemiological and etiological investigations have revealed substance abuse to be a health and behavior problem with multiple causal roots. A number of wide-ranging factors have been shown to predict higher probability of substance abuse in longitudinal prospective studies (Kandel, Simcha-Fagan, and Davies 1986; Newcomb, Maddahian, and Bentler 1986; Simcha-Fagan, Gersten, and Langner 1986; Hawkins, Catalano, and Miller 1992). These findings suggest that the prevention of substance abuse may ultimately require a multiple component strategy with elements focused on different predictors thought to be causal. The complexity of such an undertaking is daunting.

However, advances in the understanding and prevention of cardiovascular disease have provided a promising model for comprehensive substance abuse prevention. Comprehensive communitywide programs focused on reducing environmental and behavioral risks for heart and lung disease have demonstrated positive effects on health behaviors, including reductions in cigarette smoking (Jacobs et al. 1986; Lefebvre et al 1987; Puska et al. 1989; Farquhar et al. 1990; Vartiainen et al. 1990). As with heart and lung disease, alcohol and other drug abuse is predicted by many risk factors in the individual and the environment. These converging lines of evidence support the hypothesis that interventions reducing multiple risk factors in family, school, peer, and community environments hold promise for alcohol and other drug abuse prevention. This essay reviews current progress and prospects in substance abuse research from this perspective.

Our aims are to summarize what is currently known about the problem of substance abuse in the United States, to review the effectiveness of current prevention strategies, and to suggest promising directions for the future in terms of policy, intervention, and research. Current knowledge about drug use and abuse patterns and trends is summarized in Section I. Section II discusses the advances and limits of recent drug abuse prevention efforts, which have sought primarily to change laws and norms and to teach social influence resistance skills to young people. Section III discusses the research base of knowledge about the epidemiology and etiology of substance abuse and the effectiveness of various prevention strategies. Methodological and measurement problems are described, and their implications for prevention research are discussed. Section IV introduces emerging principles of prevention based on the public health model of risk reduction and reviews risk and protective factors for substance abuse. Section V explores research and policy directions for the future in light of current knowledge about prevention and risk and protective factors for substance abuse. Interventions that reduce identified risks and enhance protective factors against substance abuse are reviewed with respect to their promise for substance abuse prevention. Emerging trends such as the emphasis on community ownership of prevention initiatives are explored.

I. Current Knowledge About Drug Use and Abuse

Data from two national surveys provide evidence that the prevalence of drug use decreased in the general population during the ten years from 1982 through 1992. The National High School Senior (NHSS) Survey, an annual survey of nationally representative samples of high school seniors conducted since 1975 by researchers at the University of Michigan (Johnston, O'Malley, and Bachman 1992), has documented substantial declines in the percentage of students who report having used marijuana or cocaine during the previous month and somewhat smaller declines in the percent reporting current use of alcohol and cigarettes, although in 1993 the prevalence of marijuana use increased after more than a decade of decline. The National Household Survey of Drug Abuse, a survey of a nationally representative sample of U.S. household members aged 12 and over (National Institute on Drug Abuse [NIDA] 1991) showed similar declines in the prevalence of drug use during the 1980s and early 1990s.

Currently, the most widely used and widely accepted drug in the United States and Great Britain is alcohol. Just under 90 percent of American high school seniors report having used alcohol in their lives. Over 80 percent report having used alcohol in the past year. About one-third report having consumed five or more drinks in a row in a two-hour

period within the two weeks preceding the survey. Whereas the prevalence of illegal drug use has decreased dramatically since the early 1980s, the prevalence of alcohol use has decreased only slightly during the same period, and the prevalence of tobacco use among high school seniors has remained relatively stable.

In contrast to the findings indicating that the prevalence of illegal drug use is down, however, data from other sources suggest that the abuse of drugs in some segments of the population has not decreased. Reports of emergency room visits involving substance abuse from the Drug Abuse Warning Network (DAWN)—a representative sample of hospital emergency rooms located throughout the United States, including 21 oversampled metropolitan areas (Substance Abuse and Mental Health Services Administration [SAMHSA] 1993)—have increased during this same period.[1] Similarly, urine tests of persons arrested for non-drug-related crimes in 24 metropolitan areas participating in the Drug Use Forecasting System (DUF) reveal that recent drug use among this population is quite prevalent and has not decreased during the past five years (Center for Substance Abuse Research [CESAR] 1993). Moreover, each of these sources of data indicates that there are pronounced differences in both levels of use and types of substances used most frequently in different demographic groups and geographic regions of the country (Johnston et al. 1991; NIDA 1991; SAMHSA 1993).

Despite these demographic and geographic variations, however, heavy drug use and abuse consistently appear to be much more prevalent among the most disaffected and disadvantaged populations (Gerstein and Green 1993). For example, studies of the homeless (Breakey et al. 1989; Fors and Rojek 1991) reveal that these populations exhibit rates of alcohol and other drug use up to 25 times higher than do school- or household-based populations. Urine tests of residents of homeless shelters in New York City conducted in January 1992 revealed a 54 percent prevalence of recent cocaine use and a 20 percent prevalence of recent marijuana use (New York City Commission on the Homeless 1992). Rates of recent self-reported drug use in a sample of 253 homeless and runaway youths in shelters in the Southeast were two to seven times higher than in comparison school samples (Fors and Rojek 1991). A survey of 1,436 chronic absentee students and dropouts aged 15 to 17 from two urban areas in California found that the prevalence of heavy alcohol and other drug use among survey respondents was more than five times that obtained from school surveys (Horowitz 1992). The apparent concentration of substance abuse among the disadvantaged is a challenging problem (Sawhill 1989; Johnson et al. 1990; Wish 1990-91; Gerstein and Green 1993).

Drug use is also related to criminal and violent behavior. Heavy use of alcohol and other drugs appears to increase risk for both commission and victimization of homicide and other acts of violence, as well as predatory crimes (Chaiken and Chaiken 1990). A study of 2,000 inmates in California, Michigan, and Texas revealed that 83 percent of prisoners incarcerated for violent offenses were taking drugs daily during the month prior to their committing an offense (Chaiken and Chaiken 1982). Another study reported that up to 50 percent of homicides in New York City were believed to be drug-related (Goldstein, Brownstein, and Ryan 1992). Although drug use is very prevalent among high-rate criminal offenders, the relationship between drugs and crime is complex (Chaiken and Chaiken 1990). Existing evidence suggests that involvement in criminal activity often precedes heavy drug use and that personality factors, situational factors, sociocultural factors, and the nature of the specific drug itself mediate the relationships among drug use, crime, and aggression (Chaiken and Chaiken 1990; Nurco, Kinlock, and Balter 1993).

These data suggest that there are different categories of drug users in this country and that current U.S. prevention policies have been differentially effective with different populations. Given the high costs associated with drug abuse, the apparent imperviousness of some segments of the population to current prevention policies and practices raises important policy issues.

1. Prior to 1988 the sample of hospitals participating in the DAWN was not representative of all hospitals in the coterminous United States. The national estimates are comparable between the period preceding 1988 and the period after but were estimated using different procedures to account for the sampling differences.

A. Drugs of Abuse

A large number of psychoactive substances hold potential for abuse. These include tobacco and alcohol, drugs that are legally purchased and used by adults in both the United States and Great Britain. These are, not surprisingly, the drugs most widely used by both adolescents and adults in the United States. In school and household samples, marijuana is the most widely used illicit drug (NIDA 1991), although rates of cocaine use are higher than marijuana use among individuals arrested by law enforcement agencies (Wish 1990-91). Other drugs—including both illegal substances such as cocaine and crack cocaine, heroin and LSD, and medically prescribed substances such as amphetamines, other opiates, tranquilizers, and barbiturates—are often lumped together in drug abuse prevention studies under a single category of "hard" drugs.

Because of their status as drugs that can legally be purchased and used by adults, tobacco and alcohol have not been a major focus of research on drug abuse conducted by criminologists, with the exception of those concerned with adolescent populations. However, from the perspective of drug abuse prevention, tobacco and alcohol are important substances for two reasons. First, they are the drugs most widely abused in the United States. In 1992, 400,000 Americans died of tobacco-related causes and 100,000 died of alcohol-related causes, whereas 30,000 died from the abuse of illegal drugs (Schroeder 1993). From a public health perspective, tobacco and alcohol abuse clearly require preventive attention. Much of the research on the prevention of abuse of these substances over the past 30 years has been done by public health researchers.

Second, research has revealed a predictable pattern of stages of drug use (Yamaguchi and Kandel 1984; Kandel, Yamaguchi, and Chen 1992). In the United States, initiation of tobacco use often precedes initiation of alcohol use. In turn, initiation of alcohol use virtually always precedes initiation of marijuana use, which almost always precedes initiation of use of cocaine and other "hard" drugs. For these reasons, tobacco, alcohol, and marijuana have been referred to as "gateway" drugs. Onset of use of these "gateway" drugs in early adolescence is an important predictor of subsequent drug abuse (Kandel 1982; Robins and Przybeck 1985). These findings have influenced many scientists and practitioners working on drug abuse prevention to concentrate on delaying the initiation of alcohol, tobacco, and marijuana use rather than on preventing the use of a specific category of "hard" drug. For these reasons, this review of prevention strategies does not classify prevention approaches by drug addressed. However, where an approach has focused on a specific drug or where results of prevention efforts differ by substance, these are indicated.

B. Substance Use versus Substance Abuse

The conflicting trends in the prevalence of drug use in the general population and indicators of drug abuse in emergency room admissions and treatment statistics, as well as among homeless and prison populations, underscore the importance of defining the terms "drug use" and "drug abuse." Data from Johnston, O'Malley, and Backman's (1992) high school senior surveys reveal that a relatively large proportion of individuals use alcohol or marijuana at least once during adolescence without becoming involved in the frequent use of these substances and without developing drug-related problems. These findings have been consistently confirmed in longitudinal studies of the etiology and consequences of drug use (Newcomb and Bentler 1988; Shedler and Block 1990). Similarly, a large proportion of adults in the United States drink alcohol, whereas alcohol abuse and dependence are estimated to occur in about 14 percent of the population over the life course (Helzer, Burnam, and McEvoy 1991). It is reasonable to hypothesize that behaviors with such different rates in the population may arise from somewhat different causes. In short, the causes of drug initiation, casual or occasional drug use, frequent drug use, and drug abuse may well be different (Hawkins et al. 1986).

What distinguishes substance use from substance abuse? The answer depends on the normative, legal, and medical definitions dominant in the society. In the United States, substance abuse has been defined by the American Psychiatric Association (APA 1987) as a pattern of pathological use that persists for at least a month and that causes impairment in social or occupational functioning in the family, at

school, or in a work setting. However, a single instance of possession or use of certain illegal substances such as cocaine or heroin can bring criminal charges and sanctions and may be viewed as an indication of substance abuse. In this essay, the APA's definition is used to distinguish substance abuse from substance use.

In seeking to understand the field of substance abuse prevention, it is important to recognize that different prevention efforts have focused on different drug-related outcomes. Some initiatives have tried to reduce the incidence of new cases of drug use in young adolescents. In school curricula, community media campaigns, and state laws raising the legal drinking age from 18 to 21, for example, the goal has often been to prevent the initiation of drug use in the general population. Other efforts have tried to reduce the prevalence of use in general or in specific populations without specific attention to the goal of preventing or delaying drug use initiation. Efforts to reduce drug supplies and incarcerate drug dealers, for example, seek to prevent substance abuse by decreasing the availability of substances.

Unfortunately, even though most substance abuse prevention workers might agree that their ultimate goal is the prevention of substance abuse, very few studies of the effectiveness of drug abuse prevention interventions have assessed their effectiveness in reducing impairment or other negative consequences of drug use. Few have, in short, assessed their effectiveness in preventing drug abuse as defined by the American Psychiatric Association. Although this is a serious limitation in substance abuse prevention research, important progress has been made toward understanding the promise and limitations of a number of approaches to prevention, and, as discussed later, the field of prevention science has developed a set of commonly shared empirically based principles that are guiding current work in substance abuse prevention research.

II. Drug Control Policy and Prevention through the 1980s

Initiatives to reduce substance abuse are conventionally, if misleadingly, said to focus on drug supply and drug demand. The former consist mostly of law enforcement activities, the latter mostly of prevention and treatment programs.

A. Law Enforcement and Interdiction

The association between drug use and crime has influenced U.S. drug control policy over the last 15 years to focus the preponderance of resources on interdiction and "user sanctions" (i.e., incarceration) rather than on treatment or prevention (Reuter, Falco, and MacCoun 1993). From 1981 to 1989, the number of individuals arrested and committed to state prisons for drug offenses increased nearly eight times (Bureau of Justice Statistics 1992). In 1981, 11,487 individuals were committed to state prisons in the United States for drug offenses. In 1989, 87,859 individuals were committed for drug offenses. In 1981, 7.7 percent of the individuals admitted to state prisons were drug offenders. By 1989, 29.5 percent of those admitted to state prisons were drug offenders. Much of the recent demand for prison construction in the United States has been fueled by the incarceration of increasing numbers of drug dealers and drug users. Moreover, given the concentration of drug dealing and abuse in the inner cities (Johnson et al. 1990) and the disproportionate numbers of persons of color who reside in inner-city neighborhoods, the crackdown on drug offenders has contributed to a disproportionate number of persons of color being arrested and imprisoned for drug offenses (Blumstein 1993).

The current focus on user sanctions emerged during the past 15 years. During the 1960s and 1970s the primary focus of U.S. drug control policies was to treat heroine addiction and prevent drug-related crime. Methadone treatment of addicted Vietnam veterans and the urban poor, the groups most affected by heroin addiction, was widely used (Wish 1990-91). The casual use of drugs such as marijuana and cocaine was generally tolerated and a few states decriminalized possession of small amounts of marijuana. These policies were similar in many respects to current policies in Canada and most Western European countries where the emphasis of drug control policies is on treatment and harm reduction (Reuter, Falco, and MacCoun 1993). An increase in use of marijuana among broad sectors of U.S. society during the 1970s and of cocaine during the early 1980s has been attributed to normative changes

brought about by the Vietnam War and a rejection of governmental regulation and ideology among middle- and upper-class youth (Johnston 1991). This was followed by a reaction against casual drug use and the federally declared "War on Drugs" during the 1980s and early 1990s.

Although treatment and law enforcement have had some effect in limiting drug abuse in the United States (for reviews, see Anglin and Hser 1990; Moore 1990), they are not a focus of this essay. Treatment studies focusing primarily on alcohol and heroin and, more recently, cocaine abuse have demonstrated that addicts and drug abusers can achieve abstinence but that relapse following treatment occurs in one-third to two-thirds of cases (U.S. Surgeon General 1988). Those who remain in treatment longer typically have the best outcomes; however, dropout rates from treatment programs are high. The characteristics of the environments that addicts return to following completion of treatment appear to have an important role in maintaining or undermining achieved abstinence.

Foreign policy and interdiction efforts focusing on reducing the quantity of illegal drugs entering the country have sought to reduce drug abuse through reducing availability and increasing prices, particularly for heroin and marijuana (Moore 1990). These efforts have not been effective in eliminating the supplies of prohibited drugs or in raising the retail price of illegal drugs. To illustrate, in spite of more than doubling federal spending on interdiction and law enforcement from $1.8 billion in 1986 to $3.7 billion in 1989, the average street price of cocaine was estimated by the federal Drug Enforcement Agency to have fallen from $100 to $75 dollars per gram during that period. The availability of drugs in the United States has not declined, nor have prices for drugs on the street increased significantly. These findings confirm an analysis by the Rand Corporation (Polich et al. 1984) indicating that interdiction and law enforcement efforts should not be expected, in the face of strong demand, to eliminate illegal drug supplies, to significantly raise the price of illegal drugs, or to deter drug dealing. Taken together, the bulk of the evidence suggests that reducing demand for drugs is a more effective preventive strategy that supply reduction (Wilson 1990; Blumstein 1993).

It should be noted that interdiction and law enforcement can be viewed as efforts to convey a strong normative message regarding the unacceptability of the use of illegal drugs, thereby reducing demand for these drugs. The law enforcement efforts in the "War on Drugs" may have been more effective in reducing demand for illegal drugs among certain groups than in reducing drug supplies. Well-publicized enforcement actions communicate social norms of disapproval against the distribution and use of illegal drugs or drinking and driving. Those individuals who have a strong stake in their roles in family, work, and the community may be deterred from illegal drug involvement or drinking and driving by perceptions of risk associated with these behaviors. Those with less commitment to roles in the larger society are less likely to be deterred by legal sanctions (Sherman et al. 1992). Individuals with weak commitments to socially acceptable roles may view the relative reinforcements of drug dealing and use as worth the risks, even in the face of a normative consensus against the use of illegal drugs in the larger society. In short, enforcement efforts may have a deterrent effect in reducing demand for drugs, but they are most likely to deter those least likely to engage in drug abuse.

B. Major Approaches to Demand Reduction

Most recent substance abuse prevention research has focused on two factors that predict higher rates of substance use: norms favorable to drug use, and social influences to use drugs. Broad normative change campaigns using the media and classroom-based social influence resistance curricula in school classrooms were widely implemented in the 1980s and early 1990s. These prevention initiatives sought to foster strong norms against the use of drugs and to develop skills in young people to resist social influences to use. Developmentally, these factors have their greatest effects at the point of drug use initiation. Thus, their preventive effects on early drug use initiation should be detectable over relatively short time periods.

1. Changing Social Norms. Direct attacks have been made on social norms favorable to drug use. Normative changes during the 1980s were symbolized by the Red Ribbon week of the National Federation of Parents for Drug Free Youth; the Reagan

administration's "Just say NO!" campaign; the National Media Partnership's advertising campaigns ("This is your brain on drugs"); the proliferation of antismoking and antidrug curricula in the schools; and smoking restrictions in airplanes, schools, offices, and public places. The media and advertising industries have cooperated in a national project to encourage negative attitudes toward the use of illegal drugs through the use of antidrug advertising. Results of mall intercept surveys indicate that saturation advertising in ten markets was accompanied by significant changes in norms and by attitudes less favorable to marijuana and cocaine when compared with other markets over a one-year period (Black 1989). Similarly, school policies regulating smoking have shown effects on the amount of smoking by students (Pentz, Brannon, et al. 1989).

2. Social Influence Resistance Strategies. During the 1960s and 1970s, substance abuse prevention approaches in schools provided information about drugs and their effects, promoted affective development or intrapersonal growth, and provided alternative activities to replace opportunities for drug use and to remediate social and academic skill deficits. Tobler's (1986) meta-analysis of 143 prevention programs using one or more of these approaches concluded that drug information and intrapersonal growth programs were not effective at reducing drug use.

In the late 1970s and early 1980s, school-based prevention efforts began to focus on teaching children in grades 5-10 the skills to recognize and resist social influences to use drugs. Classroom-based training in skills to resist influences to use drugs has become the most heavily studied strategy for preventing substance abuse. The social influence resistance approach views drug use as a socially acquired behavior (Bandura 1977). These curricula teach children through instruction, modeling, and role play to identify and resist influences to use drugs and, in some cases, to prepare for associated stresses anticipated in the process of resisting such influences (Botvin 1986).

Whereas virtually all interventions of this type offer skills in resisting social influences to use drugs, many also seek to promote norms negative toward drug use (Perry 1986; Hansen et al. 1988). These normative-change components have included efforts to depict drug use as socially unacceptable, identify short-term negative consequences of drug use, provide evidence that drug use is not as widespread among peers as children may think, encourage children to make public commitments to remain drug free, and, in some instances, use peer leaders to teach the curriculum (Botvin 1986; Klepp, Halper, and Perry 1986).

Social influence resistance approaches have also been combined with training in problem-solving and decision-making skills, skills to increase self-control and self-efficacy, adaptive coping strategies for relieving stress and anxiety, interpersonal skills, and general assertive skills (Flay 1985; Botvin 1986). Projects have also combined classroom-based social influence resistance curricula with mass-media programming and parent involvement strategies in comprehensive interventions seeking to change norms regarding drug use and increase resistance to drug-promoting influences among adolescents (Pentz, Dwyer, et al. 1989).

Several published studies of classroom curricula that focus on changing student norms and enhancing students' skills to resist drug influences, primarily in grades 6 and 7, have found modest but significant reductions, in comparison with controls, in the onset and prevalence of cigarette smoking after training (Murray et al. 1988; Schinke et al. 1988; Moskowitz 1989; Hansen 1992). A few studies have reported beneficial effects in preventing or delaying the onset of alcohol or marijuana use (McAlister et al. 1980; Botvin 1986; Hansen et al. 1988; Pentz, Dwyer, et al. 1989; Ellickson and Bell 1990). Unfortunately, longer-term follow-ups of programs of this type usually have shown that the positive short-term effects disappear over time (Hansen et al. 1988; Flay et al. 1980; Murray, Hannan, and Zucker 1989). Those few interventions that have sought to address norms and social influences in multiple domains of school, family, and the larger community (Johnson, Hansen, and Pentz 1986; Pentz, Dwyer et al. 1989; Vartiainen et al. 1990; Perry et al. 1992) or have used booster sessions to maintain consistency in normative commitments over time (Ellickson and Bell 1990; Arthur, Weissberg, and Caplan 1991; Perry et al. 1992) have shown the most durable positive effects.

Some unanticipated results from these prevention studies have suggested the importance of preventive interventions addressing a broader range of factors contributing to substance use. For example, Ellickson and Bell (1990) found that exposure to their classroom prevention curriculum was associated with greater smoking among children who were already smokers at the beginning of the study. In addition to their early initiation of cigarette smoking, these students were characterized by a number of other problems including low school achievement, poor family communication, school truancy, and conduct problems. For these children, a drug curriculum offered in seventh grade was not enough to reduce or prevent smoking. These findings suggest that a broader range of interventions focused on family, school, and community and delivered prior to the seventh grade may be required in order to prevent drug abuse among children at greatest risk.

The Federal Drug Free Schools and Communities Act restricted federal education funds to schools that enacted a drug policy and that instituted a drug abuse prevention curriculum. Partly in response to this requirement, the Drug Abuse Resistance Education (DARE) curriculum, Here's Looking at You 2000, Quest's various skills curricula, and other classroom-based curricula have been widely used in schools across the United States.

As noted earlier, the prevalence of alcohol, marijuana, and cocaine use decreased dramatically during the 1980s and early 1990s among high school students in the United States. Bachman, Johnston, and O'Malley have attributed this change to increased perceptions of risk and social disapproval of drug use. During the 1980s, as young people perceived greater risk—whether legal, social, health, family, or personal—in using drugs, they were less likely to initiate drug use (Bachman, Johnston, and O'Malley 1991). It is plausible that well-publicized enforcement, norm change strategies, and school antidrug curricula all contributed to this change in social norms and attitudes regarding drug use.

3. Regulation of Alcohol Availability and Price. Since the repeal of the prohibition of alcohol, its supply has been controlled by taxation, restrictions on liquor-by-the-drink sales, age restrictions on consumption, and restrictions on hours of purchase. Increasing the price of alcohol by increasing taxes on retail sales of alcohol has been effective in reducing alcohol consumption rates (Levy and Sheflin 1985; Saffer and Grossman 1987) and related health problems, including cirrhosis mortality (Cook and Tauchen 1982) and alcohol-related traffic fatalities (Blose and Holder 1987). Similarly, increasing the legal age for alcohol purchase and consumption from age 18 to 21 has been shown to decrease rates of teen drinking and driving and alcohol-related traffic fatalities among teens (Krieg 1982; Cook and Tauchen 1984; Saffer and Grossman 1987; Decker, Graitcer, and Schaffner 1988; Joksch 1988). Generally, efforts to restrict the use of alcohol and cigarettes through increased taxes, regulation of retail outlets, regulation of public smoking, and minimum age requirements for legal alcohol and tobacco use have reduced the use of these substances (Cook and Tauchen 1982; Holden and Blose 1987; Pentz, Brannon, et al. 1989; O'Malley and Wagenaar 1991).

However, there are limits to the effectiveness of these regulatory approaches. For example, anecdotal evidence suggests that, when regulation increases cost or reduces availability of alcohol beyond a certain point, displacement may occur, especially among the most economically disadvantaged. Some users switch to illegal means of obtaining legal substances, such as the manufacture and sale of corn liquor currently reported in some urban inner-city areas.

It is a mistake to conclude from the evidence regarding alcohol and tobacco regulation that illegal drugs should be legalized so that they could be regulated in this way. From a public health perspective, legalization of cocaine or other illegal drugs is a bad idea. Legalization of illegal substances would inevitably increase the prevalence of use of these substances, exposing larger percentages of the population to health risks associated with use.

III. Methodological Issues in Drug Prevention Research

It is not the purpose of this essay to critique the methodological and measurement adequacy of specific drug abuse research studies. However, a number of issues that pertain to drug abuse prevention research should be considered when weighing the

evidence, individually and cumulatively, from the studies available. Drug abuse research involves study designs that are challenged by measurement constraints, mixed units of analysis, differential attrition, and differential implementation as well as the interpretive challenge presented by heterogeneous effects across populations and along the developmental life course. Careful theoretical specification, multiple measurement sources, and multiple and varied statistical analysis techniques can be employed to meet these challenges.

A. Measurement Issues

Much of what has been learned about the etiology and epidemiology of alcohol and other drug use has come from surveys of individuals' knowledge, attitudes, and behaviors regarding alcohol and other drugs. Longitudinal studies using self-report data have provided information about childhood precursors of adolescent drug and alcohol use (Kandel 1978; Hawkins, Lishner, and Catalano 1985; Brook et al. 1986; Block, Block, and Keyes 1988), patterns of progression in use involving different drugs and movement from experimentation to heavy use (Kanel, Kessler, and Margulies 1978; Yamaguchi and Kandel 1984; Newcomb and Bentler 1986), and adult consequences of adolescent drug use (Newcomb and Bentler 1988; Shedler and Block 1990). The extensive reliance on self-report survey data is not surprising given the nature of the behavior in question. Whereas use of tobacco and alcohol products often occurs in public settings, use of illicit drugs is clandestine behavior. Other variables typically examined in these studies include personal attitudes, beliefs, and perceptions about drug use. The most direct method of measuring these constructs is to ask the individual.

This is not to say that survey research methods are free from criticism (e.g., Johnston and O'Malley 1985). National and regional surveys of high school students have been criticized for missing those at greatest risk for exhibiting behavior problems (e.g., school dropouts and absentees, runaways, and those confined to institutions) (Cernkovich, Giordano, and Push 1985; Fors and Rojek 1991). Moreover, the validity of self-reports of illegal behavior has been questioned (U.S. General Accounting Office [USGAO] 1993). There is evidence that adults tend to underreport socially undesirable behavior (Harrell 1985; Wish 1990-91), whereas children and youth may be inclined to either underreport or overreport such behavior, depending on the circumstances. Problems with self-report surveys also include ambiguous definitions of the behavior in question and inaccuracies in recalling whether and how often a behavior occurred during the specified response period (Elliiott and Huizinga 1988).

Self-report surveys also may have differential validity with different demographic and age groups (Huizinga and Elliott 1986). Despite concerns about possible differences in the meaning and predictive utility of different constructs with different racial and ethnic groups, existing research suggests that the validity of many constructs does not vary across demographic groupings (Austin and Pollard 1993; Gottfredson and Koper 1993; G.D. Gottfredson 1993; Vega et al. 1993). Other research has indicated that most distortions in self-report research are minor and do not pose a threat to the internal validity of prevention program evaluations since errors are equally distributed across the intervention and control groups (Reinisch, Bell, and Ellickson 1991). However, more work is needed to establish the conditions under which self-report inaccuracies are most and least likely to occur.

In response to these criticisms, a number of techniques have been suggested to improve the accuracy and validity of self-report surveys for measuring drug use. National household surveys of youth and adults have been developed to avoid the sampling limitations inherent in classroom-based surveys (e.g., NIDA 1991). Physiological methods of assessing alcohol and tobacco use (e.g., saliva thyiocyanate, expired air carbon dioxide, urinalysis, and hair testing) have been advocated as methods for improving the accuracy of self-reports (Murray et al. 1987; USGAO 1993). Parent, teacher, and peer ratings of a child's behavior are frequently used to assess problem behaviors but have not been widely used to measure drug use. Each of these measurement approaches has its own limitations (Forman and Linney 1991).

Research comparing different measurement strategies has indicated that self-report surveys, when administered privately and confidentially with

adequate attention paid to the clarity of item meanings and reporting period boundaries, can provide data with adequate reliability and validity. Moreover, self-report surveys can be administered widely with relatively little cost and can minimize sampling problems caused by lack of consent to participate in more invasive procedures. For these reasons, self-report surveys will continue to be widely used in drug abuse prevention research.

Two basic strategies can be used to improve the validity of measurements used in prevention research. The first is to use multiple measurement strategies and informants to examine the validity of key constructs through their relationship to theoretically similar and dissimilar constructs (Campbell and Fiske 1959). Multiple measures of the same construct using different measurement strategies and informants are expected to correlate much more strongly than measures of theoretically different constructs using the same measurement strategy. Using these techniques, variance due to bias in a particular measurement strategy can be distinguished from variance in the construct itself (Campbell and Fiske 1959), and a "nomological net" can be developed that defines and validates a construct by placing it in a web of relationships to various measures (Patterson and Bank 1986). Prevention research should incorporate assessments from different sources, including student, parent, peer, teacher, and household surveys and archival indicators of risk factors and outcomes.

The second strategy is to examine patterns of relationships among a standard set of measures of the various constructs in different samples and in different contexts. Replication of research findings plays a central role in the validation of those findings in any scientific endeavor, yet so far replication studies have been rare in prevention research. Although many studies have examined risk and protective factors for alcohol and other drug abuse, few have used consistent sets of constructors and measures. Thus, it is difficult, if not impossible, to compare findings across studies, which severely limits the usefulness of the body of findings as a whole. Without comparable data across studies, it is impossible to distinguish the impact of different interventions, samples, or measures on study findings. A core set of psychometrically sound measures of those constructs that have emerged as consistent predictors of alcohol and drug abuse, used in multiple studies with different populations, would allow more rigorous testing of prevention effects and hypothesized relationships among variables in different population subgroups.

To some extent, standardization of instruments has begun to occur with regard to measures of alcohol and other drug abuse. Propelled by a desire to compare local trends in drug use prevalence to national trends, many states have adopted items from the NHSS Survey. However, in a recent examination of survey items from statewide classroom surveys of alcohol and other drug use administered by six states with whom we are collaborating, we found more differences than similarities in the ways questions were phrased and response options presented these differences, although often subtle, can have substantial impact on the distributional characteristics of responses that, in turn, can change patterns of observed correlations among the variables dramatically. Careful definition of the key baseline, intervening, and outcome variables relevant to the prevention approach employed, along with the use of standardized and validated instruments and multiple data sources, can help strengthen the conclusions to be drawn from studies of preventive interventions.

B. Mixed Units of Analysis

In many published studies of drug abuse prevention programs, a basic premise of experimental design—that the unit randomized to experimental condition is the unit of analysis—is violated. Schools or classrooms are often the unit of random assignment to experimental or control condition, but analyses of the effect of the intervention are typically assessed using the individual student as the unit of analysis. School or classroom differences are thus confounded with program effects on individuals (Biglan and Ary 1985). Some studies have addressed this problem by assigning multiple schools or classrooms to each condition, then analyzing at the classroom level (Botvin et al. 1984; Biglan et al. 1987; Hansen et al. 1988; Pentz, MacKinnon, et al. 1989).

When scarce resources impose limits on the number of units that can be randomly assigned, some

alternative solutions have been suggested. Randomized block and factorial designs can be employed to stratify schools by factors known to affect key outcomes (McKinlay, Stone, and Zucker 1989). Mixed model analyses of variance (Koepsell et al. 1991) and generalized estimating equations (Liang and Zeger 1986) can be used to estimate both the individual and group level components of variation. Alternatively, to account for variability attributable to the school, multiple investigators conducting similar studies with different populations in comparable or contrasting school settings could build a collective case for the general effectiveness of a given approach. Clear specification of the relevant features of the school setting and careful attention to implementation integrity are critical elements of this approach. Murry and Hannan (1990) have concluded that the most prudent course continues to be to assure that the unit of analysis and unit of assignment are the same.

C. Homogeneity of Effect across Different Populations

One problem with the current status of substance abuse prevention research comes from the variation and inconsistencies in study findings (Leukefeld and Bukoski 1991). Existing prevention studies have shown differential effectiveness with different demographic groups. When sample sizes are sufficiently large, researchers can investigate directly the differential effects of preventive interventions on different groups. When subgroups are not large enough for such analysis, Dwyer et al. (1989) have proposed statistical methods using combined logistic and multiple regression models to estimate interaction effects between intervention condition and baseline risk levels. Although this solution is proposed for assessing differential effects across baseline drug use levels, it may be applicable to other quantifiable risk factors as well. Oversampling of smaller demographic groups can also be used to generate large enough samples to investigate differential program impact. Ultimately, replication studies are needed to confirm the utility of specific prevention strategies with different populations.

D. Systematic Attrition

Problems of attrition are acute in school-based studies that are designed to follow longitudinal cohorts of students but use the school or classroom as the unit of random assignment (Hansen, Tobler, and Graham 1990; Biglan et al. 1991). The ecology of schools is such that many students move in and out of the system during any given year. This is especially true in schools located in neighborhoods with high rates of alcohol and other drug use. The external validity of results from school-based preventive interventions has been compromised in many studies by systematic attrition of those at highest risk for drug abuse.

Many published studies of school-based drug abuse prevention interventions have not addressed attrition, reporting results only for students remaining in experimental and comparison classrooms (Biglan et al 1987). Where attrition has been investigated, studies have consistently shown that subjects with higher baseline levels of tobacco, alcohol, marijuana, and hard drug use are most likely to be lost at follow-up (Biglan et al. 1987; Hansen et al. 1988; Ary et al. 1990; Tebes, Snow, and Arthur 1992), raising questions as to the generalizability of reported results to those at greatest risk. Several solutions to this problem have been proposed. McKinlay et al. (1989) recommend the "intention-to-treat" approach, in which all subjects in the original cohort are retained for the analysis to avoid the bias of differential attrition and preserve the integrity of the randomization. Alternatively, direct observation of the effects of missing data due to attrition may be obtained by including a dummy-coded variable for subjects lost to the study in the analysis (Raymond 1987). Recent advances in statistical methods for imputing missing data (e.g., McArdle and Hamagami 1991; Graham and Donaldson 1993) provide another alternative for adjusting estimates of program effect that are threatened by participant attrition.

E. Intervention Implementation and Intensity

Prevention studies should also investigate the effects of differential intervention implementation and intensity (McKinlay et al. 1989; Institute of

Medicine [IOM] 1994). By randomly and independently selecting samples of classrooms or schools in the intervention condition at each measurement point, factors hypothesized to influence the effect of the intervention may be examined (e.g., length of exposure, level of teacher training, variety of media employed). In our own substance abuse prevention studies, we have proposed and used three steps in examining implementation: collection of data to assess degree of implementation, reporting of data on implementation for each dimension of the intervention, and inclusion of implementation data in the tests of efficacy (Hawkins and Lam 1987; Hawkins, Abbott, et al. 1991).

F. Measuring Developmental Change and Intervention Effects

Designs nesting cross-sectional intervention studies within longitudinal panel studies have special relevance and appeal for prevention research. Such designs are well suited to explore questions of group differences as well as change over time, thus providing for tests of intervention effectiveness and for estimation of developmental sequences. Cross-sequential designs, conceived particularly to study developmental problems (Schaie 1965; Tonry, Ohlin, and Farrington 1991), allow estimation of age, cohort, and period effects, thereby producing data both on the development of and changes in drug risk and use patterns over time and on the effects of interventions across cohorts of adolescents (Hawkins, Abbott, et al. 1991).

A major challenge for substance abuse prevention research at this time is to overcome methodological weaknesses. Much work is proceeding along the lines described above. Meanwhile, the failure of substance abuse prevention strategies to establish durability of effects or to show consistent results with substances other than tobacco, as well as the questions remaining about the strategies' effects on abuse as opposed to initiation or occasional use, all suggest that a second major line of prevention research should be pursued.

IV. Prevention Science: The Emergence of Risk Reduction as a Strategy for Prevention

Public health research offers a model for prevention that seeks to reduce risk factors for disease or disorder and promote processes that protect or buffer against risk (IOM 1994). This risk reduction model offers a promising strategy for the prevention of alcohol and other drug abuse. The risk reduction approach was pioneered by investigators concerned with cardiovascular disease who carried out longitudinal studies to identify risk factors for heart disease. They found that factors such as smoking, diet, stress, lack of exercise, and family history of heart disease all contributed to risk for cardiovascular disease (Farquhar et al. 1985). Risk factors are characteristics of individuals or their environments that, when present, increase the likelihood that individuals will develop a disorder or disease (Garmezy 1983). To qualify as a risk factor, a variable must occur before the onset of the disorder and be associated with an increased probability of disorder. Risk reduction trials that addressed several of the risk factors for cardiovascular disease found that it was possible to lower risk (Farquhar et al. 1990). Evidence has also emerged that morbidity is reduced by prevention strategies that use a risk reduction approach to prevent cardiovascular disease (Vartiainen et al. 1990; IOM 1994).

Recent longitudinal research has identified risk and protective factors in the individual and the environment that consistently predict drug involvement (Kandel, Simcha-Fagan, and Davies 1986; Newcomb, Maddahian, and Bentler 1986; Simcha-Fagan, Gersten, and Langner 1986; Hawkins, Catalano, and Miller 1992). Moreover, the evidence indicates that the likelihood of drug abuse is higher among those exposed to multiple risk factors (Bry, McKeon, and Pandina 1982) and that the risk of drug abuse increases exponentially with exposure to more risk factors (Newcomb et al. 1986). The higher rates of drug abuse among criminal and homeless populations are consistent with studies of personal, social, and environmental risk factors that are predictive of substance abuse. This line of research suggests that intervention to prevent drug abuse should focus on reducing multiple risk factors in family, school, peer, and community environments.

There is also increasing evidence that the effects of exposure to risk can be mitigated by a variety of individual and social characteristics that can be viewed as protective factors. Protective factors may directly decrease dysfunction; they may interact

with a risk factor to buffer dysfunction; they may disrupt the mediational chain through which a risk factor operates to cause the dysfunction; or they may prevent the initial occurrence of a risk factor (Coie et al. 1993). To the extent that protective factors are identified that lower the likelihood of drug abuse among those exposed to risk factors, strategies can seek to reduce risk by enhancing these protective factors. Research with populations exposed to multiple risks has identified subgroups of individuals who are able to negotiate risk exposure successfully, escaping relatively unscathed (Werner 1989). These observations have led to interest in the etiological importance of factors that may protect against health problems including drug abuse.

Another important finding from research on risk and protective factors for drug abuse lies in the overlap among problem behaviors (e.g., Dovovan and Jessor 1985; Elliott, Huizinga, and Ageton 1985; Barone et al., forthcoming) and the use of some common factors for predicting multiple outcomes (Osgood et al.; Dryfoos 1990). A number of risk and protective factors for drug abuse are also predictors of delinquency (Hawkins et al. 1987), teen pregnancy (Dryfoos 1990), and school dropout (Slavin 1990). This suggests that prevention efforts focused on risk reduction may have a direct effect on diverse disorders that are predicted by these common risks. An important objective of substance abuse prevention research focused on risk reduction is to understand and assess the broader effects of prevention interventions seeking to address these common risk factors. The potential benefit to society of addressing common precursors of a wide range of health, mental health, and behavior problems that lead to nonproductiveness and to the costly utilization of health, mental health, drug and alcohol, and criminal justice services may be greater than simply decreasing the incidence of diagnosable cases of substance abuse. At least, it is important that effects on school achievement, on criminal behavior, and on other measures of adjustment be measured in substance abuse prevention studies using a risk reduction approach.

Most evaluated substance abuse prevention programs have addressed two risk factors that are salient developmentally just prior to or simultaneous with initiation of drug use (e.g., norms favorable to use and social influences to use drugs). It is not known whether these approaches can protect children made most vulnerable by previous exposure to other risk factors. Ellickson's social influence resistance curriculum, which demonstrated significant reductions in tobacco use for baseline experimenters and nonsmokers, was associated with increases in tobacco use among baseline smokers (Ellickson and Bell 1990). It is possible that these youngsters, having already defined themselves as part of a smoking subculture with attachments to tobacco-using peers, rejected drug resistance skills as antithetical to their social group identity. Learning skills to resist prodrug social influences may be important but insufficient to prevent substance use among those who have been "set up" for drug involvement by exposure to individual, family, or community risk factors earlier in their development (Block, Block, and Keyes 1988; Shedler and Block 1990). This possibility suggests a search for prevention strategies effective in reducing other factors, developmentally prior to social influences to use drugs, that predict drug abuse. Such strategies should be investigated for their long-term effects in preventing drug abuse.

A risk-focused approach to the prevention of substance abuse seeks to prevent drug abuse by eliminating, reducing, mediating, or moderating risk factors for substance abuse. As with cardiovascular disease, longitudinal studies have identified multiple biological, psychological, and social factors at several levels that contribute in some degree to the prediction of drug use. Knowledge regarding the causal status of many of these risk and protective factors is far from complete. Clayton (1993) recently identified key subjects on which little is known concerning the etiology of substance abuse: (a) which risk factors are predictive of the various stages in drug use other than initiation, including continuation, progression within drug classes, progression across drug classes, regression, cessation, and relapse; (b) the causal pathways connecting risk factors to later drug use and abuse; (c) the dynamic interactions between various risk and protective factors and behavior at different developmental stages; and (d) the reasons why most people who experience multiple risk factors do not end up abusing drugs. Despite the limitations in our understanding of the causal pathways that may or may not link specific

risk and protective factors to subsequent drug abuse, to the extent that they are malleable, they represent the most promising targets currently available for preventive intervention (Lorion and Ross 1992; Coie et al. 1993). Eliminating or reducing those risk factors that play a causal role in etiology should reduce the prevalence of substance abuse.

Risk factors for substance abuse have been identified both within individuals and in the environments within which they develop, including families, schools, peer groups, and the broader community. These risk factors have been described elsewhere (Newcomb, Maddahian, and Bentler 1986; Simcha-Fagan, Gersten, and Langner 1986; Hawkins, Catalano, and Miller 1992) and are summarized here in table 1. These risk factors are predictive of the frequent use of alcohol or other drug use during adolescence and early adulthood, dysfunction associated with substance use, or both.

A. Individual Characteristics

Some children appear to be at greater risk for alcohol and drug abuse by virtue of their family

TABLE 1: Risk Factors for Adolescent Substance Abuse

Risk Factor	Etiological Study	Evidence (Findings)
A. Individual factors:		
1. Family history	Goodwin 1985	About half of hospitalized alcoholics do not have a family history of alcoholism.
	Pollock et al. 1983	More slow-wave electroencephalogram activity was found in children of alcoholics than nonalcoholics.
	Schuckit, Parker, and Rossman 1983; Schuckit 1980; Schuckit and Rayes 1979; Schuckit 1987	Differences were found between children of alcoholics and nonalcoholics in serum prolactin response, muscle response, and levels of acetaldehyde after administration of alcohol.
2. Genetic factors	Blum et al. 1990	Genetic susceptibility to at least one form of alcoholism is suggested by polymorphic patterns of dopamine D2 receptor gene.
	Grove et al. 1990	Significant concordance was found among monozygotic twins raised apart for diagnosis of drug-related problems, antisocial behavior. No concordance has been found for alcohol-related problems.
	Pickens et al. 1991	Higher concordance rates were found among monozygotic than among dizygotic twins for alcohol and drug abuse. Results were stronger for males than females.
	Kaij 1970; Hrubec and Omenn 1981	Monozygotic twins were more than twice as likely as dizygotic twins to be concordant for alcoholism (all males).
	Goodwin et al. 1974; Goodwin et al. 1977; Boheman 1978; Badoret, Cain, and Grove 1980; Cadoret and Gath 1978	Rates of alcoholism ranging from 18-27 percent were found for adopted sons of alcoholics compared with 5-6 percent for adopted males without biological alcoholic parent.
3. Biochemical factors	Cloninger, Sigvardsson, and Bohman 1988	Sensation seeking and low-harm avoidance predict early-onset alcoholism.
	Zuckerman 1987; van Knorring, Oreland, and von Knorring 1987; Tabakoff and Hoffman 1988	Sensation-seeking, early-onset alcoholism was linked to platelet monoamine oxidase activity.
	Suwacki and Ohara 1985; Schuckit 1987	Aldehyde dehydrogenase differences were found in Asians with lower rates of alcoholism than controls.

Risk Factor	Etiological Study	Evidence (Findings)
4. Early and persistent problem behaviors	Robins 1978	More variety, frequency of child antisocial behavior portends adult antisocial behavior.
	Lerner and Vicary 1984	"Difficult" temperament in 5-year-olds contributes to drug problems in adulthood.
	Schedler and Block 1990	18-year-old frequent marijuana users had emotional distress in childhood.
	Kellam and Brown 1982; Lewis, Robins, and Rice 1985; Nylander 1979; Loeber 1988; Spivak 1983	Aggressiveness in boys ages 5-7 predicts frequent drug use, delinquency in adolescence, problems in adulthood.
	Loeber and Dishion 1983	Only 30-40 percent of boys with problem aggressive behavior maintained it 4-9 years later.
	Loeber 1988; McCord 1981; Barnes and Welte 1986; Kandel 1982	Early aggressive or antisocial behavior persisting into early adolescence predicts later adolescent aggressiveness, drug abuse, and alcohol problems.
	Milich and Loney 1980	Hyperactivity or attention-deficit disorder raises delinquency risk if combined with conduct problems.
	Gittelman, Mannuzza, and Bonaguar 1985	Hyperactivity in children, especialy accompanied by conduct problems, increases substance abuse risk in late adolescence.
	Brook et al. 1990	Children who are irritable or distractible, have temper tantrums, fight with siblings, or engage in predelinquent acts are more likely to use drugs in adolescence.
5. Alienation and rebelliousness	Jessor and Jessor 197; Kandel 1982; Penning and Barnes 1982; Jessor, Donovan, and Windmere 1980; Robins 1980	Alienation from doninant social values and low religiosity are positively related to drug use and delinquent behavior.
	Bachman, Johnston, and O'Malley 1981; Kandel 1982; Smith and Fogg 1978	Rebelliousness and resistance to traditional authority are positively related to drug use and delinquent behavior.
	Jessor and Jessor 1977; Jessor 1976; Paton and Kandel 1978	High tolerance of deviance, resistance to authority, strong need for independence, and normlessness are linked with drug use.
	Shedler and Block 1990	Interpersonal alienation at age 7 predicted frequent marijuana use at 18.
6. Attitudes favorable to drug use	Kandel, Kessler, and Margulies 1978; Krosnick and Judd 1982; Smith and Fogg 1978	Initiation into substance use is preceded by values favorable to its use.
7. Early onset of drug use	Rachal et al. 1982; Kandel 1982; Fleming, Kellam, and Brown 1982; Robins and Pryzbeck 1985	Misusers of alcohol begin drinking earlier than users; earlier onset of drug use predicts greater and more persistent use of more dangerous drugs.
	Brunswick and Boyle 1979; O'Donnell and Clayton 1979	Earlier initiation of drug use increases probability of deviant activities.
	Kandel, Single, and Kessler 1976	Later onset of drug use predicts lower drug involvement and higher probability of discontinuation of use.

Risk Factor	Etiological Study	Evidence (Findings)
B. Family factors: 8. Family drug behavior	Cotton 1979; Goodwin 1985; Cloninger et al. 1985; Johnson, Schoutz, and Locke 1984; Kandel, Kessler, and Margulies 1978; McDermott 1984	Parental and sibling alcoholism and use of illicit drugs increase risk of alcoholism, drug use initiation, and drug abuse in children.
	Ahmed et al. 1984	Drug salience in the household is the best predictor of children's expectations to use and actual use of alcohol, tobacco, and marijuana.
	Hansen et al. 1987	Parental modeling was directly related to friends' use of drugs, which in turn was related to adolescent subjects' drug use.
	Brook et al. 1988	Oldest brothers as well as parents each had independent effect on younger brother's use. Both drug modeling and drug advocacy by older brothers had independent effects and interacted with parental drug use to provide a risk/protective effect.
	Brook et al. 1990	Fathers' nondrug use and emotional stability enhanced effects of peer nonuse of drugs.
	McDermott 1984; Hansen et al. 1987; Barnes and Welte 1986; Brook et al. 1986; Jessor, Donovan, and Windmer 1980	Perceived parent permissiveness toward drug and alcohol use was more important that actual parent drug use in determining adolescent drug, alcohol use.
9. Family management practices	Kandel and Andrews 1987; Baumrind 1983; Penning and Barnes 1982	Lack of or inconsistent parental discipline and low parental educational aspirations for children predict initiation into drug use.
	Ziegler-Driscoll 1979; Kaufman and Kaufman 1979	Overinvolvement by one parent accompanied by distance or permissiveness by the other was associated with risk.
	Baumrind 1983	Parent authoritativeness is related to children's pro-social, assertive behaviors; parent nondirectiveness and permissiveness is associated with higher drug use.
	Reilly 1979	Common characteristics of families of adolescent drug abusers: negative communication patterns; inconsistent unclear behavior limits; and unrealistic parental expectations.
	Norem-Hebeisen et al. 1984	Drug users saw fathers as more hostile, adversarial, and both parents as less caring, more rejecting.
	Tec 1974	Parental drug use in an unrewarding family structure is more linked to marijuana use than parental drug use in a rewarding family context.
	Brook et al. 1990	Parent-adolescent attachment is related to less marijuana use. The psychological stability of mothers offsets the effects of peer drug use.
	Shedler and Block 1990	The quality of mother's interactions with 5-year-olds is related to marijuana use at 18.
	Peterson et al., forthcoming	Good family management practices predicted less adolescent alcohol use, even when parents used alcohol.

Risk Factor	Etiological Study	Evidence (Findings)
10. Low bonding to family	Kandel, Kessler, and Margulies 1978; Brook et al. 1992; Braucht, Kirby, and Berry 1978; Penning and Barnes 1982; Kandel and Andrews 1987	Lack of parent-child closeness and lack of maternal involvement are related to drug use initiation.
	Hirschi 1968	Bonding inhibits delinquency.
	Elliott, Huizinga, and Ageton 1985; Brook et al. 1990	Family bonding interacts with peer variables to influence delinquency and drug use.
	Jessor and Jessor 1977; Kim 1979; Norem-Hebeisen et al. 1984; Gorsuch and Butler 1976; Selnow 1987; Brook et al. 1990; Brook et al. 1986; Hundleby and Mercer 1987	Family involvement and attachment discourage youth drug initiation and level of use.
11. Family conflict	Baumrind 1983; Penning and Barnes 1982; Robins 1980	Children from homes broken by marital discord are at higher risk of delinquency and drug use.
	Wilson and Hernstein 1985	There was no independent contribution of parents' marital dissolution to delinquent behavior.
	McCord 1979; Rutter and Giller 1983; McCord and McCord 1959; Porter and O'Leary 1980; Hetherington, Cox, and Cox 1979; Wallerstein and Kelly 1980; Simcha-Fagan, Gersten, and Langner 1986	Family conflict is a stronger predictor of delinquency than family structure (intact parental marriage).
	Needle, Su, and Doherty 1990	Adolescents who experienced parental divorce during their adolescent years were more likely to use drugs than adolescents who experienced their parents' divorce during childhood.
C. School factors:		
12. Academic failure	Jessor 1976; Smith and Fogg 1978; Robins 1980	Failure in school predicted adolescent drug abuse, as well as the frequency and levels of use of illicit drugs.
	Feldhusen, Thuson, and Benning 1973	Early antisocial behavior may predict later academic failure.
	Hundleby and Mercer 1987	Good school performance reduced likelihood of frequent drug use in ninth graders.
13. Low commitment to school	Johnston, O'Maley, and Bachman 1985	The use of a variety of drugs is significantly lower among students expecting to attend college.
	G.D. Gottfredson 1988	4-6 percent of variance in truancy was associated with drug involvement, controlling for ethnicity, parent education, delinquency.
	Kelly and Balch 1971	How much students like school is related to levels of drug use.
	Friedman 1983	Time spent on homework and the perception of relevance of course work are related to levels of drug use.

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Risk Factor	Etiological Study	Evidence (Findings)
D. Peer factors: 14. Peer rejection in elementary grades	Parker and Asher 1987; Coie et al. 1982	Low acceptance by peers seems to elevate risk for school problems and criminality.
	Kellam, Ensminger, and Simon 1980	Children who had been aggressive as first graders or aggressive and shy had higher levels of drug use than those who were just shy.
	Brook et al. 1986	Childhood traits of social inhibition, isolation, and aggression were not associated with an adolescent drug use stage, but aggression, lower inhibition, and lower isolation in adolescence were associated with a higher drug use stage.
	Cairns et al. 1988; Hartup 1983; Tremblay 1988	Aggressiveness may be associated with acceptance by other aggressive peers who could foster drug use; similarly, socially rejected children may form friendships with other rejected children in adolescence, leading to later delinquent behavior.
15. Association with drug-using peers	Barnes and Welte 1986; Kandel 1978, 1986; Kandel and Andrews 1987; Elliott, Huizinga, and Ageton 1985; Jessor, Donovan, and Windmer 1980; Brook et al. 1990	Peer use of substances is among the strongest predictors of substance use among youth.
	Newcomb and Bentler 1986; Gillmore et al. 1990	Influence of peers on drug use is stronger than that of parents for whites, African-Americans, Asians, and Hispanics.
	Harford 1985	Nondrinking African-American youths reported fewer drinking friends than African-American youths who drank.
	Dembo et al. 1979	Friends' use of alcohol and marijuana was related to use by African-American and Puerto-Rican youths.
	Brook et al. 1990, 1992	The most powerful linkage in the causal pathway to marijuana nonuse was association with nondrug-using peers.
E. Contextual factors: 16. Availability	Gorsuch and Butler 1976	Increased alcohol availability led to increases in drinking prevalence, amount of alcohol consumed, and heavy use of alcohol.
	Maddahian, Newcomb, and Bentler 1988; Dembo et al. 1979; G.D. Gottfredson 1988	Availability affected use of alcohol and illegal drugs.

Risk Factor	Etiological Study	Evidence (Findings)
17. Laws and norms:		
a) Taxation	Levy and Sheflin 1985	A one-dollar increase in tax on alcohol led to one-half percent decrease in consumption.
	Cook and Tauchen 1982	An increase in the alcohol tax led to a sharp decrease in consumption and cirrhosis mortality.
	Saffer and Grossman 1987	Higher taxes were associated with lower teen drinking and fatalities. A higher tax was more salient than drinking age.
b) Laws regulating to whom liquor is sold	Saffer and Grossman 1987; Krieg 1982; Cook and Tauchen 1982; Joksch 1988	Higher drinking age is associated with fewer teenage traffic fatalities and driving while intoxicated citations.
c) Laws regulating how liquor is sold	Holder and Blose 1987; Blose and Holder 1987	Liquor-by-the-drink sales increase consumption of distilled spirits but not the proportion of drinkers in the population.
d) Criminal laws making drugs illegal	Polich et al. 1984	Neither doubling of interdiction nor increased arrests of drug dealers affect retail prices or availability of illegal drugs.
e) Cultural norms	Watts and Rabow 1983; Flasher and Maisto 1984; Robins 1984; Vaillant 1983	Alcohol consumption and other alcohol-related effects are associated with sociodemographic factors, including ethnic and other group norms.
	Johnston 1991	Changes in nationwide norms regarding the acceptability and harmfulness of marijuana and cocaine preceded decreases in prevalence.
	Atkins, Hocking, and Black 1984	Teens reporting higher drinking levels had more exposure to ads promoting alcohol.
18. Extreme economic deprivation	Bursik and Webb 1982; Farrington et al. 1985	Poverty was associated with childhood conduct problems, delinquency, chronic offenses.
	Bachman, Johnston, and O'Malley 1981; Zucker and Harford 1983; Murray et al. 1987	Parental education and occupation were positively correlated with teen alcohol and marijuana use.
	Robins and Ratcliff 1979	Extreme poverty is one of three factors increasing risk of adult alcohol and drug abuse in adults who were antisocial as children.
	Brook et al. 1990	Low socioeconmic status in childhood is related to greater drug use in adolescence.
19. Neighborhood disorganization	Murray 1983; Herting and Guest 1985; Wilson and Hernstein 1985; Fagan 1988; Simcha-Fagan and Schwartz 1986; Sampson, Castellano, and Laub 1981; Sampson 1986	Characteristics of neighborhoods such as population density, mobility, physical deterioration, low attachment, and high crime are related to juvenile crime and drug trafficking.

histories, their temperament, and their early and persistent display of behavior problems. A family history of alcohol and other drug abuse has been well established as a risk factor for substance abuse (Schuckit 1987; Tarter 1988; Merikangas, Rounsaville, and Prusoff 1992). Some evidence supports the hypothesis of a genetic predisposition both for alcoholism (Murray, Clifford, and Gurling 1983; Blum et al. 1990; Merikangas 1990) and other drug abuse (Grove et al. 1990; Pickens et al. 1991). Studies of twins and adoptees have provided the strongest evidence of a genetic risk factor for alcoholism, particularly among males (Hrubec and Omenn 1981; Goodwin 1985). Recently, Kendler (1992) reported evidence for a similar genetic component in female alcoholism. However, these studies also indicate that most offspring of alcoholics do not themselves become alcoholic, while about half of hospitalized alcoholics do not have a family history of alcoholism (Clayton 1993; Goodwin 1985). Several researchers have suggested that different forms of alcoholism may have different levels of genetic influence (Cloninger et al. 1989).

Some studies suggest that inherited biological traits and temperament may provide the link between genetics and behavior (Schuckit 1987; Tarter 1988; Blum et al. 1990). High behavior activity level (Tarter et al. 1990), psychopathology (Weiss 1992), and sensation seeking (Cloninger, Sigvardsson, and Bohman 1988; Clayton 1993) have each been identified as predictors of early drug initiation or abuse. For example, hyperactivity and attention-deficit disorders in childhood have been found to predict substance abuse disorders in late adolescence, especially when combined with aggressive behaviors or conduct disorders (Gittelman, Mannuzza, and Bonagura 1985). These characteristics are hypothesized to influence the reciprocal interactions between the developing individual and his or her environment and, thus, influence acquired behavioral and habit patterns (Tarter 1988).

An early behavioral marker of risk for substance abuse is a pattern of persistent conduct problems in multiple settings. The greater the variety, frequency, and seriousness of childhood behavior problems, the more likely antisocial behavior is to persist into adulthood (Robins 1978). In a longitudinal study of five-year-olds followed into adulthood, Lerner and Vicary (1984) found that children with a difficult temperament, including frequent negative mood states and withdrawal and slow adaptability to change in childhood, were more likely to become regular users of alcohol, tobacco, and marijuana in adulthood than "easy" children, who evidence greater adaptability and positive affect early in life. Similarly, aggressive behavior in boys as early as age five has been found to predict frequent drug use in adolescence (Kellam and Brown 1982; Brook et al. 1990) and drug problems in adulthood (Lewis, Robins, and Rice 1985).

Individual attitudes also predict higher risk for substance abuse. Shedler and Block (1990) found that interpersonal alienation measured as early as age seven predicted frequent marijuana use at age eighteen. Alienation from the dominant values of society (Jessor and Jessor 1977; Penning and Barnes 1982), low religiosity (Jessor, Donovan, and Windmere 1980; Brunswick, Messerik and Titus 1992), and rebelliousness (Backman, Johnston, and O'Malley 1981; Kandel 1982; Block, Block, and Keyes 1988) have been shown to predict greater drug use. Favorable attitudes toward drug use precede the initiation of drug use and have also consistently predicted drug use (Kandel, Kessler, and Margulies 1978; Krosnick and Judd 1982).

B. Family Characteristics

Families affect children's drug use behaviors in a number of ways. Beyond the genetic transmission of a propensity to alcoholism, family modeling of drug use behavior and permissive parental attitudes toward children's drug use predict greater risk of alcohol and other drug abuse (Johnson et al. 1984; Barnes and Welte 1986; Brook et al. 1986). Generally, the more members of the household who use a drug, the greater is a child's risk of early initiation of use of that drug (Ahmed et al 1984). Moreover, involving children in parental alcohol or drug using behaviors (such as getting a beer or a pack of cigarettes for a parent) also increases risk for early initiation of drug use (Ahmed et al. 1984), which is, itself, one of the strongest predictors of alcohol and other drug abuse (Robins and Pryzbeck 1985). Parents are not the only family role models for their children's behavior, however. Brook and her colleagues (1988) found that older brothers' drug behavior and attitudes were more strongly related to younger brothers' use than was parents' modeling of drug use.

More generally, poor parenting practices and high levels of conflict in the family appear to increase risk for several adolescent health and behavior problems including the abuse of alcohol and other drugs (Brook et al. 1990). Kanel and Andrews (1987) found that lack of maternal involvement in activities with children; lack of, or inconsistent, parental discipline (see also Penning and Barnes 1982; Baumrind 1983); and low parental educational aspirations for their children predict initiation of drug use. Stanton (1979), Kaufman and Kaufman (1979), and Ziegler-Driscoll (1979) suggested that familial risk factors include a pattern of over involvement by one parent and distance or permissiveness by the other.

Parents' disciplinary techniques have also been related to adolescents' subsequent drug use. Brook and her colleagues (1990) found that maternal control techniques were more important than paternal techniques in explaining adolescent marijuana use.

Baumrind (1983) found that parental nondirectiveness or permissiveness contributed to higher levels of drug use. Another study revealed that common characteristics of families with adolescent drug abusers included negative communication patterns (criticism, blaming, lack of praise), inconsistent and unclear behavioral limits, and unrealistic parental expectations of children (Reilly 1979).

In addition to parental disciplinary style, aspects of parent-child relationships have been shown to predict adolescent substance use. Shedler and Block (1990) found that the quality of mothers' interaction with their children at age five distinguished children who were frequent users of marijuana at age eighteen from those who had only experimented with marijuana use. Mothers of children who became frequent users were relatively cold, underresponsive, and underprotective with their children, giving their children little encouragement but pressuring them to perform in tasks. Brook and her colleagues (1992) found that maternal low attachment and paternal permissiveness predicted movement from low to moderate levels of alcohol and marijuana use. Norem-Hebeisen et al. (1984) also found that the quality of adolescents' relationships with their parents was related to patterns of drug use. Generally, drug users perceived their fathers as more hostile, rejecting, and adversarial than did nonusers.

Conversely, positive family relationships—involvement and attachment—appear to discourage youths' initiation into drug use (Gorsuch and Butler 1976; Jessor and Jessor 1977; Kim 1979; Norem-Hebeisen et al. 1984; Brook et al. 1986; Selnow 1987). Hundleby and Mercer (1987) found that adolescents' reports of parental trust, warmth, and involvement explained small portions of the variance in the extent of tobacco, alcohol, and marijuana use. Bonding to family may inhibit drug involvement during adolescence in a manner similar to the way in which family bonding inhibits delinquency (Hirschi 1969). Brook et al. (1990) reported a causal pathway in which parental internalization of traditional values led to the development of strong parent-child attachment; this mutual attachment led to the child's internalization of traditional norms and behavior, which in turn led the youngster to associate with non-drug-using peers, which led to nonuse.

Peterson et al. (1994) found that the effects of parental drinking on alcohol use of their children at ages 14 to 15 were mediated by family management practices and family proscriptions against involving children in adult family members' alcohol use (such as opening or pouring drinks). Good family management practices and refraining from involving children in adult alcohol use inhibited alcohol use among 14- to 15-year-olds, even when adults in the family drank alcohol. These effects were consistent for both African-Americans and whites, through African-American parents in the sample drank less frequently, held stronger norms against alcohol use by teenagers, and involved their children less in family alcohol use than did white parents.

In summary, the risk of drug abuse appears to be increased by family management practices characterized by unclear expectations for behavior, poor monitoring of behavior, few and inconsistent rewards for positive behavior, and excessively severe and inconsistent punishment for unwanted behavior. Both permissiveness and extremely authoritarian parenting practices predict later drug abuse in children (Baumrind 1983; Shedler and Block 1990). Moreover, recent longitudinal analyses indicate that the effects of parental drinking on alcohol use of adolescent offspring are mediated by both family management practices and parental norms with respect to adolescent involvement in the adults' alcohol use (Peterson et al. 1994).

Another aspect of family functioning that has been related to drug use is the level of family conflict. Children raised in families high in conflict appear at risk for both delinquency (Rutter and Giller 1983; Farrington et al. 1985) and illegal drug use (Simcha-Fagan, Gersten, and Langner 1986). Rutter and Giller have noted that parental conflict is associated with antisocial behavior in children even when the parental dyad is intact and, conversely, that, even in samples in which homes are broken by divorce or separation, the extent of continuing parental conflict is associated with the likelihood of antisocial behavior in the children. Needle, Su, and Doherty (1990) found in a longitudinal study of 508 families recruited from a large health maintenance organization that adolescents who had experienced parental divorce during their adolescent years reported greater drug use than adolescents who had

experienced parental divorce during their childhood and adolescents whose parents had not divorced.

C. School Factors

While there appears to be no relationship between low intelligence and drug abuse, school failure beginning in late elementary grades increases risk for adolescent drug abuse. Achievement problems may result from early behavior problems, learning disabilities, the failure of teachers to motivate students, or other causes. Regardless of cause, the experience of not succeeding academically during late childhood appears to predict the early initiation of drug use (Bachman, Johnston, and O'Malley 1991), which, in turn, increases drug abuse risk. Poor school performance has been found to predict both frequency and levels of use of illegal drugs (Smith and Fogg 1978). Holmberg (1985), in a longitudinal study of 15-year-olds, reported that truancy, placement in a special class, and early dropout from school were prognostic factors for drug abuse. In contrast, outstanding performance in school reduced the likelihood of frequent drug use among a ninth-grade sample studied by Hundleby and Mercer (1987). Kandel and Davies (1992, p. 238) reported that "the present data indicate that successful school performance is a protective factor mitigating against escalation to a pattern of regular marijuana use. Working toward strengthening the educational system would have many beneficial effects, including a potential reduction in the number of students who go on to abusing drugs."

A low degree of commitment to education also appears to be related to adolescent drug use. Annual surveys of high school seniors by Johnston, O'Malley, and Bachman (1985) show that the use of hallucinogens, cocaine, heroin, stimulants, sedatives, or nonmedically prescribed tranquilizers is significantly lower among students who expect to attend college than among those who do not plan to go on to college. G.D. Gottfredson (1988) found that truancy for both males and females was associated with drug involvement after accounting for effects of ethnicity, parental education, and delinquency. Factors such as how much students like school (Kelly and Balch 1971), time spent on homework, and perception of the relevance of coursework are also related to levels of drug use (Friedman 1983), indicating a negative relationship between commitment to education and frequent drug use among junior and senior high school students.

D. Peer Factors

Peer relationships are also predictive of substance use and abuse. Although it would be premature to posit a direct link between peer rejection and substance abuse, low acceptance by peers seems to put an adolescent at risk for school problems and criminality (Parker and Asher 1987; Kupersmidt, Coie, and Dodge 1990; Coie et al. 1992), which are also risk factors for substance abuse (Hawkins et al. 1987).

Little research has been done on the direct link between peer rejection and substance use, but traits of the child that have been associated with peer rejection—aggressiveness, shyness, and withdrawal—have been examined for their relationship to drug use. For example, Kellam, Ensminger, and Simon (1980) found that children who had been shy in first grade reported low levels of involvement in drug use, whereas those who had been aggressive or had shown a combination of aggressiveness with shyness in first grade had the highest levels of use. Brook et al. (1986) found that childhood traits relevant to peer rejection—social inhibition, isolation from peers, and aggression against peers—were not significantly associated with adolescent drug use stage. However, aggression against peers during adolescence was associated with stage of use, and teenagers who were less socially inhibited and less isolated from peers were likely to be at a more advanced stage of use.

Peer use of substances has consistently been found to be among the strongest predictors of substance use among youth (Kandel 1978, 1986; Jessor et al. 1980; Elliott, Huizinga, and Ageton 1985; Barnes and Welte 1986; Kandel and Andrews 1987; Brook et al. 1990, 1992). Studies among specific ethnic groups confirm this relationship. Newcomb and Bentler (1986) reported that the influence of peers on adolescent drug use was stronger than that of parents for Caucasians, African-Americans, Asian-Americans, and Hispanic-Americans. Similar findings were reported by Byram and Fly (1984). Harford (1985) found that African-American youth

who did not drink alcohol reported fewer school friends who drank than were reported by those who did drink, and Dembo et al. (1979) found that friends' use of alcohol and marijuana was related to a youth's own use for both African-American and Puerto-Rican-American youth.

E. Early Onset of Drug Use

An early onset of drug use predicts subsequent misuse of drugs and drug abuse. The younger the child is when alcohol or other drug use is first initiated, the greater the frequency of drug use (Fleming, Kellam, and Brown 1982), the greater the probability of extensive and persistent involvement in the use of more dangerous drugs (Kandel 1982), and the greater the risk of drug abuse (Robins and Pryzbeck 1985). Conversely, a later age of drug use onset has been shown to predict lower drug involvement and a greater probability of discontinuation of use (Kandel, Single, and Kessler 1976).

F. Contextual Factors

Factors external to the individual in the broad social environment also affect rates of drug abuse. Contextual factors affect the levels of use and abuse of alcohol as well as illegal drugs. Community drug use patterns predict individual use (Robins 1984). Contextual factors that predict risk for abuse include the availability and price of alcohol and other drugs, broad social norms regarding alcohol or other drug use in the population (Vaillant 1983; Watts and Rabow 1983; Flasher and Maisto 1984; Robins 1984), poverty (Robins and Ratcliff 1979; Murray, Richards, et al. 1987), and neighborhood disorganization (Sampson 1986; Fagan 1988).

Rates of alcohol use, including heavy use and rates of illegal drug use, have been found to be higher in neighborhoods and schools where alcohol and other drugs are easily available (Gorsuch and Butler 1976; D.C. Gottfredson 1988; Maddahian, Newcomb, and Bentler 1988). Availability and price are influenced by legal restriction or regulation on purchase, by excise taxes, and by market forces. Legal restriction significantly limits the prevalence of use. This is true for all drugs including alcohol: "Contrary to the prevalent view that prohibition failed, there is substantial evidence that it reduced alcohol consumption substantially" (Goldstein and Kalant 1990, p. 1515). The epidemiological evidence from prohibition indicates that the prevalence of use of a drug increases with its legalization and decreases with legal restriction.

Demand for drugs, whether legal or illegal, drives the market. Drugs legally distributed to adults, including alcohol and tobacco, are advertised to build demand. There is limited evidence that rates of alcohol consumption among teens are associated with exposure to ads promoting alcohol (Atkin, Hocking, and Block 1984). Moreover, societal norms regarding the use of illicit drugs have been shown to affect both the incidence and prevalence of marijuana and cocaine use among high school seniors nationwide (Johnston 1991). Increased perceptions of social disapproval and harmfulness of marijuana and cocaine use among the seniors in the NHSS Survey preceded the downward trend in prevalence of use of these substances. Similarly, where laws and community norms express greater tolerance for the use of alcohol or illegal drugs, rates of alcoholism, alcohol abuse, and drug abuse are higher (Johnston 1991).

Finally, there is evidence that children who grow up in disorganized neighborhoods with high population density, high residential mobility, physical deterioration, and low levels of attachment to neighborhood may face greater risk for a range of behavior problems, including trafficking and drug abuse (Fagan 1988).

G. Generalizations and Implications from Research on Risk

Like risks for cardiovascular disease, risks for drug abuse exist in several domains. Family factors, school experiences, peers, individual attitudes and characteristics, and community norms all contribute to risk for drug abuse. The greater the number of risk factors to which the individual is exposed, the greater the risk of drug abuse (Bry, McKeon, and Pandina 1982; Newcomb, Maddahian, and Skager 1987). Thus, effective prevention of drug abuse may require coordinated intervention to reduce multiple risks, especially in areas where children are exposed to multiple risk factors early in life. The majority of individuals who experience risk factors, however, do not develop substance abuse problems, suggesting another, albeit related, line of research and interven-

tion focusing on processes that buffer or protect against risk.

II. Protective Factors

Three broad categories of factors that protect against substance use even in the face of risk exposure in childhood have been identified. The first are individual characteristics including resilient temperament, positive social orientation, intelligence, and skills (Radke-Yarrow and Sherman 1990). Whereas some individual factors, such as behavioral skills, may be modifiable, others such as cognitive processing and the ability to concentrate may be more strongly influenced by genetic and biological factors. A second protective factor is cohesion, warmth, or bonding during childhood. This generally occurs in the family, but, in addition, other social supports from teachers, other adults, and peers that reinforce the individual's competencies and commitments and support a non-drug-using belief system appear to buffer risk exposure (Garmezy 1985; Werner 1989). Finally, norms, beliefs, or behavioral standards that oppose the use of illegal drugs or the use of alcohol by teenagers also appear to serve as protective factors (Hansen and Graham 1991). As distinct from risk factors, protective factors are hypothesized to operate indirectly through interaction with risk factors, mediating and moderating the effects of risk exposure (Rutter 1990; Hawkins, Catalano, and Miller 1992).

I. Principles of Prevention Science

The existing evidence suggests the following basic principles for designing preventive interventions.

1. Focus on Reducing Known Risk Factors. The goals of prevention may be accomplished by direct efforts to reduce exposure to risk factors or by enhancing protective factors that moderate or mediate the effects of exposure to risk. Prevention efforts should specify what risk factors are targeted and should specify the mechanism or process through which these risk factors are thought to operate. Some risk factors may not be causal but may be useful in identifying high-risk populations for intervention. These should be identified. Other, causal, risk factors should be the objects of preventive interventions that seek to modify them.

2. When Reducing Risk, Enhance Known Protective Factors. Further strength may be added to preventive interventions by enhancing mutable protective factors that moderate risk. For example, interventions that focus on reducing family management problems should do so in ways that enhance family bonding and the conventional or healthy belief structure in the family. In this way, not only is the negative risk reduced, but bonding is strengthened to provide motivation to continue sound management and to obey family rules.

Further, in some circumstances, it may be impossible to reduce or eliminate certain risk factors directly through preventive intervention, but the effects of these may be moderated by intervention to enhance protective factors. For example, even in families with an alcoholic parent, it may be possible to moderate the effects of parental alcoholism on children by intervening to provide supports for good family management, school achievement, and abstinence from alcohol use by children.

3. Address Risk and Protective Factors at Appropriate Developmental Stages. Some risk and protective factors appear to be relative stable predictors across the life span, while others appear to predict dysfunction at specific periods of development. For example, poor parental monitoring appears to predict conduct disorders across childhood, while association with drug using peers is predictive of drug use only in adolescence (Dishion 1990). Conduct and behavior problems in early elementary grades signal risk for later health and behavior problems. Early intervention is warranted for children with these problems. If children experience academic difficulties in grades 4-6, this is a predictor of drug abuse risk. Tutoring and academic enrichment programs are, thus, indicated during the elementary period.

4. Intervene Early—Before the Target Behavior Stabilizes. Early initiation of drug use is a predictor of a prolonged course of involvement with drug use and of drug abuse. This suggests that preventive interventions should be delivered before the initiation of drug use. A viable goal for preventive intervention may be to delay the onset of initiation of alcohol and other drug use. This is the immediate goal of many recent drug abuse prevention initia-

tives, though few have been followed long enough to determine whether early delays in initiation translate into later reductions in diagnosable substance use disorders.

5. Include Those at High Risk. Given the additive or perhaps multiplicative effect of exposure to multiple risk factors, it is important to design preventive interventions to reach those exposed to multiple risk factors. This may be accomplished by selecting for intervention communities or schools in which there are elevated levels of risk or by identifying individuals exposed to multiple risks for special attention.

6. Address Multiple Risks with Multiple Strategies. A viable prevention strategy may require attention to individual vulnerabilities, poor child rearing, school achievement, social influences, social skills, and broad social norms, all of which are implicated in the development of adolescent drug abuse. Because risks are present in several social domains and cumulate in predicting drug abuse, multicomponent prevention strategies focused on reducing multiple risks and enhancing multiple protective factors may be required. Such strategies would be designed to build up protection while reducing or moderating risk exposure.

In sum, the evidence suggests a need for a developmentally adjusted, multicomponent risk reduction strategy that cuts across traditional health, education, and human service delivery systems. The strategy must reach those at highest risk by virtue of exposure to multiple risk factors and address the most significant risk factors they face, seeking, where possible, to increase protection as well as to reduce risk.

A risk-focused perspective on substance abuse suggests that the broad changes in social norms regarding the use of illegal drugs noted earlier are affecting those who are most bonded to the current social order. Social norms against drug use may inhibit the initiation of drug use only among children who are alienated from their families by high levels of family conflict and poor family management practices, who are alienated from school as a result of misbehavior and little academic success, and who are rejected by normative peer groups are less likely to be inhibited by parental, school, or classroom norms against the use of drugs. If not securely attached to parents, committed to school, or committed to a set of beliefs or values, young people may be unresponsive to changes in normative expectations in the larger society. It is likely that those at greatest risk of drug abuse by virtue of exposure to multiple risk factors during infancy and childhood are the least likely to be prevented from drug use initiation by current strategies promoting norms against drug use such as, "Just say NO" clubs or drug abuse prevention curricula that teach skills to resist drug prone social influences.

For this reason, it is important to assess the effects of law enforcement, normative change strategies, and social influence resistance curricula in deterring substance abuse among those characterized by multiple risk factors predictive of heavy drug use. This has rarely been done. Even if such programs are successful in reducing the prevalence of drug use in the general population, these strategies may have little or no effect on the prevalence of drug abuse as defined in this essay. To illustrate, the lifetime prevalence of alcohol use among U.S. high school seniors in 1991 was 89.5 percent, but only 3.7 percent used alcohol daily (Johnston et al. 1991). Preventive interventions focused on changing social norms and social influences could show positive effects in reducing the prevalence of alcohol use in the general population without affecting those at greatest risk for alcohol-related problems. Learning skills to resist social influences to use drugs may be a necessary, but not sufficient, element of prevention for children who have been "set up" for drug involvement by exposure to individual, family, or community risk factors (Block, Block, and Keyes 1988; Shedler and Block 1990).

If norm change and social influence resistance strategies are to be effective with those most exposed to risk, the preventive task during infancy and childhood is to reduce developmentally salient risk factors while simultaneously encouraging the development of strong social bonds to family, school, and prosocial peers. From a social development perspective, this is accomplished by creating, for developing children, environments rich in opportunities and positive reinforcement, where they may master the cognitive and interpersonal skills appropriate for their developmental age (Catalano and

Hawkins, forthcoming). These considerations suggest investigation of intervention strategies that have been effective in reducing other risk factors for substance abuse that occur earlier in the life cycle than norms favorable to use and social influences to use drugs.

V. Promising Prevention Approaches

A number of interventions have shown promise for drug abuse prevention because they address risk factors of drug abuse at appropriate developmental stages, enhance prosocial bonding directly and indirectly by promoting prosocial opportunities, promote cognitive and interpersonal skill development and reinforcement for skillful performance in prosocial situations, and use intervention techniques that have demonstrated positive effects (e.g., Botvin 1990; IOM 1994; USGAO 1994). These interventions include prenatal and infancy programs, early childhood and family support programs, programs for improving parenting skills, social competence skills training programs, programs to promote academic achievement and commitment to school, and programs to change social norms regarding use of alcohol and other drugs. The relevant literatures have been reviewed elsewhere (Hawkins, Catalano, and associates 1992; Hawkins, Catalano, and Miller 1992; IOM 1994; Yoshikawa 1994), although few such interventions have been studied specifically for drug abuse prevention effects. When well implemented, all have reduced known risk factors for drug abuse and have been shown to promote bonding to family and/or school. Examples are described in the following sections.

A. Perinatal Interventions

Interventions with pregnant women and neonates typically have not been designed to prevent drug abuse by the infant many years later. However, some have targeted characteristics of the perinatal experience and the early health and development of the infant, often associated with economic deprivation, that have been linked to higher risk for chronic delinquency and substance abuse in adolescence (Hawkins, Catalano, and Miller 1992; Nyberg et al. 1992; Yoshikawa 1994). Prenatal exposure to alcohol and other drugs, premature birth and very low birthweight, and poor early infant-caregiver relations have emerged as predictors of a number of health and behavior problems in early childhood, including aggressiveness and conduct disorder, hyperactivity and attention disorders, and low IQ and developmental delay (Telzrow 1990; Bates et al. 1991). These childhood characteristics, in turn, may interact over time with environmental conditions such as family stress associated with poverty to increase the likelihood of persistent conduct problems, school failure, poor family relations and high levels of family conflict, and alcohol and other drug abuse (Sameroff and Chandler 1975; McGee, Silva, and Williams 1984; Werner 1987). Thus, perinatal interventions that improve the chances of healthy births and infant development while increasing parents' capacity for positive, nurturing caregiving are recognized as a priority for public health policy in the 1990s (Department of Health and Human Services 1990) and should be considered in terms of their promise for prevention of alcohol and other drug abuse and chronic delinquency (Hawkins, Catalano, and associates 1992; Yoshikawa 1994).

One example of a comprehensive perinatal intervention designed to prevent a wide range of maternal and infant health and behavior problems is the Prenatal/Early Infancy Project (Olds et al. 1986, 1988). The project targeted a sample of pregnant women in a high-risk geographical area characterized by high rates of poverty, teen and unmarried parents, and child abuse and neglect. The experimental test of the intervention included 394 women, most of whom were European-American and of whom 47 percent were 19 years or younger, 61 percent lived in poverty, and 62 percent were unmarried. The intervention test compared randomly assigned groups who received either developmental screening of the children at one and two years of age, referral for services, and transportation to well child care clinics or these services combined with home nurse visitation during pregnancy and until the children were two years old.

The interventions demonstrated positive effects for both mothers and infants (Olds et al. 1986, 1988). At the 46-month follow-up, mothers who received nurse visitation had 43 percent fewer additional pregnancies, had worked 82 percent more months, and had spent fewer days on welfare than the mothers who had not been visited. Nurse-visited mothers also reported greater perceived social support and

were significantly more likely to improve their diets and stop smoking during pregnancy than mothers in the control condition. Moreover, the young teenage mothers in the experimental condition had a 75 percent reduction in preterm delivery and had 75 percent fewer verified reports of child abuse or neglect than control group mothers. Thus, the intervention had positive effects on risk factors for chronic delinquency and substance abuse, including severe economic deprivation, birth complications, and poor parenting behavior. Long-term effects on the intervention group children were, unfortunately, not assessed.

The Yale Child Welfare project is a second example of a risk reduction intervention during the perinatal period. The goal was "to help disadvantaged young parents to support the development of their children and to improve the quality of family life" (Provence and Naylor 1983, p. 3, as quoted in Seitz 1990). The intervention targeted 25 families expecting their first child who registered at the women's clinic of a large city hospital located in a depressed inner-city area and met the following criteria: the families resided in the inner-city area and had incomes less than the federal poverty level; there were no serious complications of pregnancy; and the mothers were not seriously retarded or acutely psychotic. Seventeen of these families met the criteria and agreed to participate (Trickett et al. 1982).

The intervention that began during the mother's pregnancy lasted until 30 months postpartum and included four components: home visits, pediatric care, day care, and developmental exams. The home visits were conducted by professionals (five clinical social workers, two psychologists, and one nurse) and were intended to provide close, personalized help with parents' concerns including food, housing, physical dangers, and educational, marital, and career decisions. Home visitors also acted as liaisons to other community service providers. Intervention families averaged 28 visits during the course of the intervention.

The pediatric care began with daily visits during the postdelivery hospital stay and one home visit during the first week after birth, then continued with house calls (if needed), telephone consultations, and 13 to 17 hour-long well-baby exams during the first 30 months. Intervention families received an average of 13.2 months of high-quality day care: staff were highly trained; there were no more than three children to one caregiver; each child had a primary caregiver; and an effort was made to match child-care practices with those of the parents and to work out mutually agreed upon methods of handling issues of emotional and social development. The children also received seven to nine developmental exams using the Yale Child Development Schedule (similar to the Bayley Scales of Infant Development). The four components were coordinated to address basic health, social, and developmental needs of both parents and children comprehensively.

Experimental families demonstrated positive outcomes at the ten-year follow-up, including significantly higher levels of maternal education, fewer children, children spaced farther apart, greater likelihood of full-time employment, and greater likelihood of initiating contact with their child's school teacher than a group of matched comparison families recruited from the same clinic after the intervention had ended. Children in the experimental group were rated less negatively in terms of their behavior by their teachers, were less likely to be excessively absent without a valid excuse, showed significantly better overall adjustment to school, and were less likely to have been referred for school services such as being placed in a class for emotionally disturbed children than children in the comparison group. The authors calculated that the program cost about $20,000 for each child for the full 30 months and achieved a savings of $40,000 per year (in family support costs and additional school services costs) for the total sample by the ten-year follow-up (Seitz, Rosenbaum, and Apfel 1985). These results must be interpreted with some caution, however. Although the intervention and control families were similar, they were not randomly selected or assigned. Thus, alternative explanations of the results due to nonrandomization cannot be ruled out.

These and other studies of early family support and high-quality day-care interventions (e.g., Horacek et al. 1987; Lally, Mangione, and Honig 1988; Rauh et al. 1988) have demonstrated positive effects on family functioning and cognitive and social development that appear to lead to substantial long-term benefits, including significantly reduced

risk for chronic delinquency and abuse of alcohol and other drugs (Hawkins, Catalano, and Associates 1992; Zigler, Taussig, and Black 1992; Yoshikawa 1994). These studies demonstrate both the relevance and potential power of early preventive interventions. Some of the implications of these studies are that improving access to prenatal care, providing social support to high-risk families during the transition to parenthood, and providing high-quality day care for infants and children in high-risk environments can be effective strategies for reducing risk and enhancing resilience that have an enduring positive effect on social development (IOM 1994; Yoshikawa 1994).

B. Preschool Interventions

The next category of interventions designed to reduce risk and enhance protection addresses the major developmental tasks of early childhood: gaining the cognitive, language, and social skills necessary to succeed in school. The goal of the Houston Parent-Child Development Center (HPCDC) was to promote school competence among Mexican-American children from low-income families living in Houston. The HPCDC focused on improving parents' skills to facilitate their children's development as the means to achieve this goal. Risk factors addressed included family management practices, academic failure, and early problem behaviors. The program also sought to increase the children's self-esteem, IQ, social skills, and family bonding as protective factors.

The intervention targeted Mexican-American families with a one-year-old child who was not significantly neurologically impaired and in which the family met federal poverty guidelines and the mother was not employed regularly enough to interfere with participation in the intervention. Approximately one hundred families were recruited per year over an eight-year period, were fully informed about the project, and then were randomized into equal experimental and no-treatment control groups. Comparisons of the two groups on baseline data failed to indicate any differences between them. Boys and girls were about equally represented in the sample; nearly 90 percent of the families had the father present; yearly incomes averaged about $6,000; the families had an average of three children; and roughly equal thirds of the parents preferred to speak Spanish, English, or both languages. About 40 percent of the parents had been born in Mexico, and the parents averaged seven years of education.

The intervention was delivered in two phases, beginning when the target children were one year old and lasting for two years. A total of about 550 hours of family involvement was required over the two-year period. During the first year of the program, trained female para-professionals from the barrios where the participants lived conducted 25 visits to the homes covering child development issues and information about how the mothers could promote their children's development. Several family workshops were also held during the first year to encourage participation by fathers and siblings. Mothers were invited to attend English as a Second language (ESL) classes, and community workers including a project nurse worked with each family to provide additional social and health services and to inform participants about how to obtain needed community services.

During the second year of the program, mothers and their children attended four-hour sessions four days per week at the center. During these sessions, children were taught cognitive and social skills in group settings while mothers continued to learn about child development and management skills, as well as home management, human sexuality, and drivers' education. Mothers also practiced teaching their children while being videotaped to help refine their skills. Fathers continued to be involved through monthly meetings of a Parent Advisory Committee (attended by about 80 percent of the program fathers), which offered suggestions for program content and assisted in program maintenance and advocacy. To encourage participation, transportation was provided to all activities, all teachers were bilingual (English and Spanish), and day care was provided for older siblings. However, due to the number of hours required for participation, attrition from the intervention was a serious problem, and about one-half of the families dropped out before the end of the intervention.

Postintervention measures (including videotaped mother-child interactions and home observations) indicated that the HPCDC had an immediate positive

effect on mother-child interactions and a small but significant positive effect on the child's IQ. Follow-up interviews with 128 parents from the first four cohorts when the children were four to seven years of age indicated that mothers of control boys rated their behavior as significantly more aversive than the other three gender-by-condition groups (Johnson and Breckenridge 1982). A second follow-up of 139 children conducted when they were in grades 2-5 revealed that teachers rated control children (particularly boys) as having significantly greater behavior problems than children who had been in the experimental condition. Members of the experimental group were also only one-fourth as likely to have been referred for special services and scored significantly higher on the composite score of the Iowa Test of Basic Skills than children who had been in the control group. Finally, ratings of parent-child interactions at the end of each program year were significantly related to behavior ratings in elementary school (Johnson 1988). Thus, the intervention was successful at improving parent-child interactions and the children's subsequent behavior and academic competence up to eight years following intervention.

Another well-known example of a successful preschool intervention is the Perry Preschool Project (Berrueta-Clement et al. 1984; Schweinhart 1987). Based in an elementary school in a low-income, predominantly African-American neighborhood in Ypsilanti, Michigan, the preschool program targeted three- and four-year olds using the High/Scope curriculum. The intervention actively involved the children in planning their classroom activities and met every weekday for 30 weeks each year, coupled with weekly home visits by the preschool teachers. Families participated in the program over a one- to two-year period.

Long-term follow-ups comparing the randomly assigned experimental and control group participants revealed that program participants had lower rates of aggressive, disobedient, and disruptive behavior during elementary school than members of the control group. By age 19, program participants were less likely than control students to have been arrested, been arrested five or more times, had special education placements in school, dropped out of school, or been on welfare. Program students also had higher grade point averages and lower rates of self-reported fighting than control students (Berrueta-Clement et al. 1984). The long-term positive findings were related to teacher ratings of conduct and personal behavior in elementary school, suggesting that the intervention produced positive long-term outcomes by reducing risk factors and enhancing social competence during the elementary years (Schweinhart 1987).

These two examples suggest that preschool interventions that reduce risk and improve social behavior in elementary school can lead to improved developmental trajectories and more positive long-term outcomes (Yoshikawa 1994). While these programs did not assess alcohol and other drug abuse as outcomes, the programs did demonstrate significant reductions in risk factors and problem behaviors that frequently cooccur with substance abuse.

C. Interventions during the Elementary School Years

Elementary school is typically the first major social domain that a child encounters outside of the family. Developmentally, a child must learn how to function effectively in this new domain to succeed, which entails developing social and impulse control skills as well as academic skills. The extent to which a child succeeds or fails to master the skills needed to function effectively in this new social domain can exert a powerful influence on both the child's and others' expectancies of his or her ability to function in other social domains. Thus, it is not surprising that several of the social and behavioral predictors of later alcohol and other drug abuse, as well as chronic and serious delinquency, stabilize in their predictive ability during this period. Persistent conduct problems in multiple settings, peer rejection, and academic failure and low commitment to school during the elementary years join genetic, temperament, and family factors as consistent predictors of later substance abuse and chronic delinquency (Loeber and Dishion 1983; Farrington 1987; Hawkins, Catalano, and Miller 1992).

Risk reduction interventions during this period focus on enhancing parenting and family functioning, enhancing social and academic competence, and changing the school environment to be more suppor-

tive and inclusive of children who are having academic or social difficulties (e.g., IOM 1994). Two examples of such interventions are the Seattle Social Development Project (Hawkins, Catalano, Morrison, et al. 1992), which combined teacher training, parent training, and social skills training for students in the early elementary grades, and the School Development Program developed by Comer and his colleagues at the Yale Child Study Center (Comer 1985).

The Seattle Social Development Project targeted first graders in eight Seattle, Washington public schools. The schools were selected based on high crime rates in their catchment areas, but all students in the eight schools were targeted for the study regardless of their individual risk status. All students in one school were assigned to the intervention, all students in a second school served as controls, while students in the remaining six schools were randomly assigned to either experimental or control classrooms (Hawkins, Catalano, Morrison, et al. 1992). The initial intervention lasted for four years, following the cohort of students from first through fourth grade.

The intervention included training and supervision for teachers in experimental classrooms in grades 1-4 to use proactive classroom management, interactive teaching, and cooperative learning techniques to increase opportunities for all students to participate in the classroom, increase skills for successful involvement, and increase rewards for positive involvement. The intervention also included training for the first-grade teachers in the use of an effective social skills training curriculum, the Interpersonal Cognitive Problem Solving curriculum (Shure and Spivack 1988), and two programs for parents. Parents of first graders were offered a program that taught skills for monitoring and supervising children's behavior, for using appropriate and consistent rewards and discipline, and for involving children in family activities. Parents of second and third graders were offered a program that focused on providing support and encouragement at home for the children's academic development (Hawkins, Catalano, Morrison, et al. 1992).

Assessments of the effect of these interventions made at the end of the second grade (Hawkins, Von Cleve, and Catalano 1991) and soon after the students had entered the fifth grade (Hawkins, Catalano, Morrison, et al. 1992) showed positive effects. Teacher ratings of aggressiveness in second grade were significantly lower for students in intervention classrooms than for students in control classrooms (Hawkins, Von Cleve, and Catalano 1991). By the start of fifth grade, student who had participated in an intervention classroom for at least one semester during grades 1-4 reported significantly higher levels of proactive family management, positive family communication and involvement, bonding to family, and commitment and bonding to school than control students. Students in the experimental group were also less likely to have initiated alcohol use or delinquent behavior by the fifth grade than students in the control group (Hawkins, Catalano, Morrison, et al. 1992).

Another example of an intervention designed to change the school environment in order to enhance the academic achievement of students is the School Development Program created by Comer and his associates at the Yale Child Study Center (Comer 1985, 1988). The intervention aims to increase the involvement of a broad range of stakeholders in the school to reduce school problems and create a positive school climate. Parents, teachers, school administrators, and mental health professionals join together to form a school management team, a mental health team, and a parent involvement program. The governance and management team meets weekly to address school issues, including needs and goals, school climate, curriculum, in-service training, program implementation, resources, and evaluation . The mental health team also meets weekly to consider student behavior problems from an interdisciplinary perspective, to determine whether the school is contributing to behavior problems, and to recommend changes in school policies and procedures intended to improve school climate and students' well-being. The parent involvement program creates a parent handbook describing the parents' roles in the school and opportunities for involvement through social activities and workshops, and in serving as classroom tutors or aides. The goals of the School Development Program are to improve the climate and atmosphere of the school and to increase the commitment of students and parents by improv-

ing the ties between the school and the community and the responsiveness of the school to the concerns of parents and students.

Quasi-experimental evaluations of the School Development Program applied to two inner-city elementary schools serving a predominantly low-income African-American population in New Haven, Connecticut, showed positive results. At the start of the intervention, the two schools ranked near the bottom of the city's schools in reading and mathematics achievement. A dozen years later with no change in the schools' population demographics, the two schools ranked third and fourth in the city on achievement scores, having surpassed national averages. Truancy and disciplinary problems had also decreased dramatically (Comer 1988). A follow-up study comparing children in the intervention schools with a matched comparison group found that the intervention group had higher reading and math achievement scores, school grades, and social competence scores than the comparison group (Cauce, Comer, and Schwartz 1987). A more rigorous, randomized controlled study of the intervention is now being conducted in Maryland (Jessor 1993).

D. Middle and High School Interventions

During the middle and high school years, peers begin to rival parents in their influence on the adolescent's behavior (Tao Hunter and Youniss 1982). Developmental tasks during this period of rapid cognitive and physical change include developing autonomy from one's parents and family while simultaneously learning how to relate intimately with others outside of the family, coping with pubertal changes in hormones and physical characteristics and one's emerging sexuality, and making significant life decisions about lifestyles and educational and vocational goals (Elliott and Feldman 1990). Since early first use of alcohol, tobacco, and other drugs predicts greater likelihood of later substance abuse (Robins and Przybeck 1985; Kandel, Yamaguchi, and Chen 1992), preventing or delaying the initiation of use is an important prevention goal during adolescence. Primary risk factor targets for interventions during this stage of development include the early onset of use, social influences to use drugs, social norms regarding use, and attitudes favorable to use.

Given the importance of social influences, two examples of interventions that have demonstrated promise for preventing substance abuse are those that focus on learning about social influences and changing social norms regarding use of alcohol and other drugs, and those that focus on enhancing social competence. Many of the school prevention curricula that have shown the most consistent reductions in onset and prevalence of cigarette smoking, alcohol use, and marijuana use have included lessons designed to correct students' overestimates of the prevalence and acceptability of drug use among their peers while promoting classroom norms against use (e.g., Hansen et al. 1988; Ellickson and Bell 1990; Hansen 1992).

The Adolescent Alcohol Prevention Trial examined the relative effect of social influence strategies and social norm change strategies in an experimental study of 3,011 seventh-grade students at 12 junior high schools (Hansen and Graham 1991). Schools were stratified by size, test scores, and ethnic composition and randomized to four conditions that received either information about drug use, training in skills to resist peer and advertising pressures to use alcohol and other drugs, a normative education program, or a combination of information, resistance skills training, and normative education. Results indicated that the normative education component had the greatest effect on reducing consumption of alcohol, cigarettes, and marijuana (Hansen and Graham 1991). Classrooms that received the normative education component had significantly lower rates of onset and prevalence of heavy drinking, marijuana use, and cigarette smoking than those that received either the information or resistance skills training components alone. The authors suggested that the reported positive effects of social resistance skills training curricula may have resulted from the normative education elements included in the curricula.

Other researchers have also suggested that establishing clear social norms against use is an important component of effective substance abuse prevention curricula (Ellickson and Bell 1990). Moreover, several studies have suggested that using peer leaders to assist in teaching the prevention curricula enhances their positive impact (e.g., Murray et al. 1984; Tobler 1986; Perry et al. 1989; Botvin et al. 1990). However, as noted earlier, establishing clear norms

against use may be counter-productive in preventing use among students who have already initiated use (Ellickson and Bell 1990). Norm change strategies may also, however, serve to alienate or isolate those whose behavior already violates the desired norm and produce iatrogenic effects among those at greatest risk for abuse due to early exposure to multiple risk factors.

Social competence strategies, in contrast, focus on teaching a broader array of generic life skills, including social problem-solving skills, stress reduction skills, self-regulation skills, social interaction skills, and assertiveness skills in addition to social influence resistance skills (Botvin 1990). Based on social learning (Bandura 1977) and problem behavior (Jessor and Jessor 1977) theories, these interventions attempt to provide young people with the basic skills needed to function effectively in most social domains. They address many general risk factors including early and persistent conduct problems, family conflict, academic failure, peer rejection, alienation, and lack of social bonding, as well as attitudes favorable to drug use and peer norms and influences to use drugs. These curricula often teach students to use these general life skills and then include lessons on how to apply the skills specifically to avoid alcohol and drug use.

An example of a social competence promotion intervention is the Positive Youth Development Program (Caplan et al. 1992). Classrooms in one urban middle school (90 percent African-American, 8 percent Hispanic, and 2 percent mixed race) and one suburban middle school (99 percent European-American, 1 percent Hispanic) were randomly assigned to the intervention or control condition. The 20-session curriculum included two lessons per week taught by university-based health educators along with the classroom teachers. The results indicated that students in the intervention classrooms had higher teacher-rated impulse control and conflict resolution skills following the intervention than control students. Intervention students also reported less intent to use alcohol and lower rates of heavy alcohol use than control students. The two conditions did not differ in the rates of initiation of alcohol, tobacco, or marijuana use.

Other studies by Botvin and his colleagues (Botvin et al. 1984, 1990; Botvin and Eng 1990) have also indicated the promise of social competence curricula for preventing substance abuse through reducing risk factors and enhancing protective factors. These studies have also revealed the importance of considering peer- versus adult-led interventions, the intensity (frequency) of the sessions, the importance of follow-up booster sessions to reinforce initial gains, and the integrity of implementation of the curricula. When these issues are addressed, a growing body of research suggests that school-based social competence promotion and social influence/social norm-setting curricula can delay initiation of alcohol and other drug use and lower risk for later abuse, at least among some populations.

E. Strategies for Coordinating Interventions in Multiple Domains

Despite the promise demonstrated by each of the preceding examples, it is probable that a combination of interventions will be required to influence those at highest risk for substance abuse. Given the breadth and persistence of risk exposure experienced by some segments of society (e.g., Wilson 1988; Garmezy 1993), along with the substantially higher rates of substance abuse among individuals exposed to multiple risk factors, it seems unlikely that programs that reduce one or two risk factors can appreciably lower the likelihood of abuse among these populations. For these populations, models of service delivery that link programs designed to reduce risk and increase protection in multiple domains across multiple developmental periods are needed to reduce cumulative risk. Such models require the coordination of resources of many historically and organizationally distinct social and educational service agencies and delivery systems.

Another issue complicating the development of effective drug abuse prevention strategies lies in the multiple pathways that can lead to abuse. Research on risk factors suggests that the number of factors present is more important in determining risk levels than the specific factors themselves (Bry et al. 1982; Newcomb et al. 1986; USGAO 1994). Thus, it is unlikely that any one prevention strategy will be effective with multiple populations in multiple situations (Gilchrist 1991; Gorman 1992). This suggests

that prevention programs must be customized to some extent to meet the specific needs of the populations they target.

To make such a multistrategy approach work and to ensure that changes are institutionalized, community and participant "ownership" of prevention initiatives is essential. As people come to believe that particular forms of behavior are risky or unacceptable in their social group, they are more likely to avoid those behaviors. To the extent that community members are bound together by a culture or set of shared values and standards for behavior, the community should actively take responsibility for ensuring that such values and standards are known and understood by all members.

This community role and responsibility for prevention efforts highlights the importance of attending to diversity in communities so that all groups participate in preventive activities. The preventive interventions included in substance abuse risk reduction strategies require focusing on individuals, parents, teachers, community health and social service providers, and law enforcement personnel. Cultural perspectives of different groups, classes, ethnicities, and races affect their view on parenting, teaching, and drug use as well as the prevalence of drug use among their members (Catalano et al. 1993). To be adopted and used by a community, the preventive strategy must be acceptable to community members. This is best accomplished when community leaders and opinion shapers have the opportunity to take ownership of the strategy and make it their own and when diverse community members are involved in tailoring the intervention to the community. Community efforts can affect the entire local environment, including norms, values, and policies (Bracht 1990). The firm support of community leaders and their involvement in a prevention effort should lead to long-term change; the reallocation of resources to reduce risk becomes feasible with support from key community leaders. Thus, community ownership of preventive initiatives is important from both theoretical and practical perspectives.

Here, again, cardiovascular disease prevention and smoking prevention initiatives provide a model. Recognizing the importance of community norms in shaping behavior, planners of the major risk reduction trials have intervened at the level of the community (Farquhar et al. 1990). Moreover, they have designed and implemented the interventions to create community ownership of the preventive initiatives (Farquhar et al. 1985). They have found that program maintenance requires community mobilization in addition to changing individual behavior (Farquhar et al. 1977).

The evidence suggests that multistrategy approaches that address multiple risks while enhancing protective factors hold the most promise for preventing substance abuse. The current challenge for substance abuse prevention research is to test prevention strategies that empower communities to design and take control of their own efforts to explicitly access, prioritize, and address risk and protective factors for substance abuse. Substance abuse prevention researchers have begun this work. In the Midwestern Prevention Project, Pentz and her colleagues collaborated with the Kauffman Foundation in developing a communitywide intervention component. A local project office, Project Star, was charged with program implementation including mobilizing drug abuse prevention task forces at the metropolitan and community levels and securing high visibility and news coverage for the program. The complete intervention included a curriculum of social influence resistance skills training for students in grades 6 or 7, with homework assignments to be completed with parents, booster sessions in the year after initial intervention, and organizational and training opportunities for parents in positive parent-child communication skills and in reviewing school policies, in addition to community task force and media interventions. The complete intervention was more effective than media exposure alone in reducing prevalence rates of weekly cigarette, alcohol, and marijuana use after the second year of intervention (Pentz, Dwyer, et al. 1989) and the prevalence of monthly cigarette and marijuana use three years after the original intervention (Johnson et al. 1990). However, the research did not allow investigation of the contribution of community or media mobilization to the strength or durability of effects. Studies currently being conducted by Cheryl Perry and her colleagues at the University of Minnesota and Dennis Ary and Tony Biglan at the Oregon Research Institute are also using community mobilization and empower-

ment models to address risks for alcohol and other drug abuse. They are expected to provide important information on the effects of this strategy.

Our own fieldwork in this area has been a collaboration with 60 communities in the states of Washington and Oregon. The overall goal has been to mobilize communities toward a self-defined health promotion outcome, that is, to achieve significant reductions in adolescent health and behavior problems. The mobilization process consists of three phases. In the first phase, key community leaders including the mayor, superintendent of schools, chief law enforcement officer, and business and other leaders are oriented to the project. If they commit to implementing it, they decide as a group to become the oversight body for the project and to appoint a prevention board of diverse members of their community. During the second phase, the community prevention board is constituted and trained to conduct a community risk and resource assessment. Over a six-month period the board gathers archival and survey data on indicators of the risk factors for adolescent health and behavior problems in the community. Based on these results, the board prioritizes risk factors for preventive action. The board then designs its prevention strategy to address targeted risk factors and enhance protective factors, selecting preventive interventions from a menu of programs and strategies that meet prevention principles as summarized earlier in this essay. In the third phase, the board implements and evaluates the preventive strategy, using task forces composed of community members with a stake in the outcome to insure implementation of each component. Baseline risk assessment data serves as the benchmark against which to judge community progress in risk reduction. This strategy has been successfully implemented in a range of communities but has not yet been evaluated in a controlled field trial.

VI. Conclusion

The casual use of illegal drugs in the United States is down. In the general population, norms and attitudes regarding the use of substances have become less favorable to the excessive consumption of alcohol and to the use of tobacco, marijuana, and cocaine. Unfortunately, at the same time, alcohol abuse and other drug abuse problems have remained stable or increased, as indicated by treatment and emergency room admissions. It appears that the use of drugs other than alcohol is becoming concentrated in high-risk groups. It is likely that the abuse of alcohol and other drugs will share increasing overlap or comorbidity with other legal and health behavior problems.

These findings indicate the importance of community participation in prevention initiatives. If communities are to become protective environments for healthy development, community members will have to take responsibility for identifying, prioritizing, and addressing risks in the community and for implementing strategies to reduce salient risks and enhance the development of social integration and bonding to the community and its standards. Preventive interventions seeking to reduce substance abuse prevalence among those at greatest risk must include a focus on the successful development of cognitive and social skills and social bonding from an early age and on the promotion of strong normative standards in opposition to drug abuse across the community.

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Prevention Programs That Work for Youth: Violence Prevention

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Introduction

The demand for effective violence and crime prevention programs has never been greater. On a typical day in 1992, seven teenagers were murdered. Self-report studies indicate that one in four males will be involved in a serious violent offense, a robbery, aggravated assault, forcible rape or homicide, before age 18; and in the decade between 1984 and 1994 the juvenile homicide rate doubled and the arrest rate for serious violent crimes increased 50 percent. As our communities struggle to deal with the violence epidemic of the 1990s, the search for some effective way to prevent this scourge on our children has become a national priority. This is evidenced by the dramatic shift in the public's perception about the seriousness of violence. In 1982, only three percent of adults identified crime and violence as the most important problem facing this country; by August of 1994, over half thought crime and violence was the nation's most important problem. Throughout the 90s, violence has been viewed as a more serious problem than the high cost of living, unemployment, poverty and homelessness, and health care.

While we have seen a slight decline in the juvenile homicide rate and arrests for other serious violent offenses in the last few years, these rates remain far above those of earlier decades. And with the expected increase in the size of the adolescent population in the next decade, the actual number of serious violent crimes and the number of serious intentional injuries involving adolescents will increase substantially, even if there is no change in the rates of offending or victimization. Dealing with youth violence remains a national priority.

The critical question is *how will we as a society deal with this violence problem?* At both the national and state levels, there have been five major policy and program initiatives introduced as violence prevention or control strategies in the 1990s: (1) the use of judicial waivers, transferring violent juvenile offenders as young as age 10 into the adult justice system for trial, sentencing and adult prison terms; (2) legislating new gun control policies (e.g., the Brady Handgun Violence Prevention Act, 1993); (3) the creation of "boot camps" or shock incarceration programs for young offenders, to instill discipline and respect for authority; (4) longer sentences for serious violent crimes, exemplified by "three strikes" legislation; and (5) community policing initiatives to create police-community partnerships aimed at more efficient community problem solving in dealing with crime, violence and drug abuse.

Three of these initiatives are purely reactive—they involve ways of responding to violent acts after they occur; a control strategy rather than a prevention strategy. Two are more preventive, attempting to avoid the initial occurrence of violent behavior. The primary justification for judicial waivers, increased sanctions and boot camps is a "just desserts" philosophy, that youthful offenders deserve to be punished more severely for serious violent offenses; or a deterrence/rational choice rationale which asserts that increasing the cost of violence will reduce the likelihood of its use. But there is no research evidence to suggest any of these strategies will have any increased deterrent effect over processing these juveniles in the juvenile justice system and traditional correctional settings for juveniles. In fact, the available evidence suggests that the use of waivers and adult prisons results in longer pre-trial detention, racial bias in the decision about which youth to transfer into the adult system, a lower probability of treatment or remediation while in custody, and an *increased risk of repeated offending when released.* Three-strike laws are very expensive to implement, appear to increase the risk of serious violence on the third arrest, and are less cost effective than primary prevention programs. The research evidence on the effectiveness of community policing and gun control

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legislation is very limited and inconclusive. We have yet to determine if these strategies work.

There are some genuine prevention efforts sponsored by federal and state governments, by private foundations, and by private business. At the federal level, the major initiative involves the Safe and Drug-Free Schools and Communities Act (1994). This act provided $630 million in federal grants during 1995 to the states to implement violence (and drug) prevention programs in and around schools. State Departments of Education and local school districts are currently developing guidelines and searching for violence prevention programs that have been demonstrated to be effective. But in 1995 there was no readily available compendium of successful prevention programs. Under pressure to do something, schools have implemented whatever programs were readily available. As a result, most of the violence prevention programs currently being employed in the schools, e.g., conflict resolution curriculum, peer mediation, metal detectors, locker searches and sweeps have either not been evaluated or evaluations have failed to establish any significant, sustained deterrent effects. In sum, with few exceptions, we are employing a set of programs and policies that have no documented effects on violence.

Can we prevent the onset of serious violent behavior? This is the central issue facing the nation in 1998. If we cannot, then we have no choice but to let the violence epidemic run its course and to build, fill and maintain more prisons. If we know how to prevent the onset of violence, can we mount an efficient and effective prevention initiative? There is, in fact, considerable public support for violence prevention programming for our children and adolescents. *Can we develop, promote, and sustain a comprehensive violence prevention initiative in this country?*

Violence Prevention Programs—What Works?

We do have an option. In the last decade we have achieved a major breakthrough in our understanding of the causes of youth violence and the development of effective programs and strategies to prevent violence. A new generation of violence and crime prevention programs has emerged, based upon this new body of research. While careful, scientific evaluations of these (and earlier) programs are still quite limited, our research has succeeded in demonstrating the effectiveness of selected programs in preventing or deterring crime and violence. We know these programs "work," i.e., that participation in these programs or interventions substantially reduces the likelihood that youth will become involved in violent behavior (*onset*), or if previously involved in violence, that their *rates of offending* or the *seriousness* of their offending will be reduced.

Our evaluations have also demonstrated that some very popular programs are ineffective and that a few are actually harmful, putting youth at an even greater risk of involvement in serious violent behavior. Still, most programs remain unevaluated and we simply do not know if they are effective or not. Given that some programs have proved to be harmful, even when well intentioned, there is some risk in continuing to fund unproven programs. Evaluation is often the only practical mechanism for insuring that our interventions are actually serving the best interests of our children.

An Overview of Types of Prevention Programs that Work

During the past five years, over a dozen scholarly reviews of delinquency, drug and violence prevention programs have been published, each recommending programs the authors claim have been demonstrated to work. In most cases these recommendations were based on evidence of some statistically significant prevention or deterrent effect in an experimental or quasi-experimental study, which is, by itself, a rather low threshold of scientific evidence. The recommended approaches to violence prevention range from a focus on individuals, to families, schools and neighborhoods or communities. They include both primary prevention programs and interventions with youth who have already been involved in violent behavior; they include programs and policies that are designed to change individuals, social environments, or both.

In general, individual-level approaches that modify or enhance personal and social competencies like problem-solving skills, moral reasoning, decision

making skills, self-control and academic or job-related skills are effective if they are high quality, well implemented programs. While individual counseling is not a particularly effective intervention for delinquent offenders generally, there is some evidence that it may work with more serious offenders. In contrast, supportive or insight-oriented programs like psychotherapy and intensive casework approaches are generally ineffective.

The evidence for programs that focus on family relationships and functioning, particularly on family management and parenting practices, is quite strong and consistent. The most successful family interventions involve programs with multiple components that address not only the individual at risk but the internal dynamics of the family and the family's involvement in the neighborhood, school and with their children's peer groups. These are both individual and context change programs. In addition, preschool programs that involve long-term frequent home visitation, have also provided effective; head-start type programs that do not include home visitation have achieved mixed results. Some nurse home visitation programs with at-risk mothers have demonstrated deterrent effects on violence, but others have not.

There are mixed findings for most school-based programs, both those involving individual change programs and those involving attempts to change the social climate or organization. As noted above, programs designed to enhance individual competencies have generally demonstrated positive effects and these are often school-based programs. Peer mediation, peer counseling and conflict resolution training programs have only limited evaluations, but none appears to be effective, particularly when they are implemented as single-component programs. They appear more promising when implemented as part of a more comprehensive, multi-contextual intervention. Law Related Education, midnight basketball and other recreational programs have mixed or inconclusive findings—we don't know if these programs work or not.

There are some school-based alcohol and drug prevention programs that have demonstrated effectiveness in preventing the use of these substances, and some that have been extensively evaluated and found to be ineffective (e.g., DARE). As a result of this "no effect" finding, DARE recently has made significant modifications to their program which hold some promise for improving its effectiveness, illustrating the positive use of evaluation findings. Effective drug prevention programs typically focus on problem solving, competence building and resistance training, and these programs have also proved to be effective for violence and crime prevention. Finally, prevention programs that focus on building the school's capacity to initiate and sustain innovations and programs aiming to clarify, establish and enforce school rules and general social norms have some demonstrated effectiveness.

Community-based interventions have been evaluated. Some that appear to have significant deterrent effects include the use of directed police patrols in community "hot spots," mentoring programs, and gang violence prevention programs. Neighborhood watch programs have been evaluated and are ineffective. Work programs have generated mixed results. Short-term or summer work programs are not effective violence or crime prevention programs, whereas there is some preliminary evidence that Job Corps may be an effective violence prevention program.

There is little evidence that traditional institutional programs such as diversion, boot camps, wilderness/stress programs, shock/scare programs, positive peer culture or guided group interaction programs are effective. In some cases, e.g., diversion and boot camps, these programs are less expensive than alternatives and may have a favorable cost-benefit effect compared to alternatives. There is also some evidence that positive peer culture has a positive effect on institutional adjustment, but this effect does not carry over to other settings once youth leave the institution, and in some cases has had negative effects. Shock/scare type programs have also demonstrated harmful effects, increasing the risk of violent or delinquent behavior.

There are four important observations that must be made about the above overview of findings. First, with few exceptions, community-based programs that proved effective were equally effective when located in a correctional setting. The location of these programs did not appear to be a critical factor.

Second, the most effective programs were those that were comprehensive, e.g., multi-component, multi-context interventions. Third, relatively few of these studies involved a long-term follow-up of participants after leaving the program or intervention. When this was done, it was often found that these effects were not sustained once youth left the program or intervention and returned to their families, old friends and neighborhoods. This was particularly true for residential and institutional programs. These programs worked while they were being implemented and the program could manipulate the environmental conditions and reward appropriate behavior and punish inappropriate behavior. In general, however, the sustainability of these deterrent effects is problematic. Fourth, the deterrent effects were generally modest, involving reductions in the onset or repeated offending in the 10-20 percent range, e.g., reducing the risk of recidivism from 50 percent to 30 or 40 percent.

Model Violence Prevention Programs

In light of the above, there is some danger of *overstating* the claim that we have developed effective violence prevention programs and interventions. The scientific evidence in support of particular programs recommended in most scholarly reviews involves a relatively low threshold of scientific evidence, and in many cases is insufficient to justify promoting these programs as successful prevention programs to be implemented on a national scale. The standard for selecting model programs for a national violence prevention initiative must be very high, one that guarantees a low risk of failure and will generate a high level of public confidence. I propose a minimum set of three scientific standards for selecting model programs: (1) demonstrated deterrent effects in a strong, scientifically sound, experimental study, (2) replication of this deterrent effect on multiple sites, and (3) evidence that the effects achieved during the program are sustained after leaving the program or intervention site.

This set of selection criteria establishes a very high standard, one that will be difficult to meet. But it reflects the level of confidence that is necessary if we are going to recommend that communities replicate these programs with reasonable assurances that they will prevent violence. Demonstrating some initial success in deterring delinquency, drug use and violence during the program or intervention is not enough. Designation as a model program requires that the deterrent effects be long-term or permanent effects, effects which are sustained beyond treatment or participation in the designed intervention. Replication is also an important element in establishing program effectiveness. It demonstrates the robustness of the program and its prevention effects and its exportability to new sites with continued deterrent effects. This criterion is particularly relevant for selecting model programs for a national prevention initiative where it is no longer possible for a single program developer or designer to maintain personal control over the implementation of his or her program. Adequate procedures for monitoring the quality of implementation must be in place and this can be established only through actual experience with replications. While the selection of model prevention programs will clearly involve other factors, these three are essential.

An Overview of Ten Model Programs

The Center for the Study and Prevention of Violence has examined the published evaluations of violence and crime prevention programs in an attempt to identify programs that meet the above standards for a model program. We began by examining the set of programs recommended in the scholarly reviews noted earlier. We have since expanded our search to a much broader set of programs and continue to look for programs that meet these standards. To date, we have reviewed over 450 delinquency, drug and violence prevention programs and have identified ten programs that meet or come close to meeting these standards. The names of these programs and their designers or developers include the following:

- The Nurse Home Visitation Program—Dr. David Olds
- The Bullying Prevention Program—Dr. Dan Olweus
- Promoting Alternative Thinking Strategies (PATHS)—Dr. Mark Greenburg
- Big Brothers Big Sisters Mentoring Program—Ms. Dagmar McGill
- Life Skills Training—Dr. Gil Botvin

- Midwestern Prevention Project—Dr. Mary Ann Pentz
- Quantum Opportunities—Mr. Ben Lattimore
- Multisystemic Therapy (MST)—Dr. Scott Henggeler
- Functional Family Therapy (FFT)—Dr. James Alexander
- Multidimensional Treatment Foster Care—Dr. Patricia Chamberlain

The timing or point of intervention varies considerably across this set of programs. The Nurse Home Visitation program is a prenatal intervention with at-risk single mothers; the bullying and PATHS programs are typically introduced in elementary school; Life Skills Training and the Midwestern Prevention Project are both school-based drug prevention programs that are introduced in middle or junior high school; the Quantum Opportunities program is a high school-level program for high poverty, minority youth promoting graduation and entry into college or advanced job training; MST and FFT are both multi-component and multi-context interventions with the family as the primary point of intervention for youth typically aged 12-17; and the Multidimensional Treatment Foster Care Program is a residential program for serious and chronic offenders, typically aged 9-18. Most of these programs involve activities designed to build personal skills and competencies. The Bullying, MST, FFT, Midwestern Prevention Project and Multidimensional Treatment Foster Care programs are also designed to change the social contexts in which youth live, i.e., the ways families function, the monitoring and supervision of youth, the creation and enforcement of rules at home and school and the creation of new opportunities at school and in the community.

The standard we have set for program selection is very high. Not all of the ten programs selected meet all three standards equally well, but as a group they come the closest to meeting these standards that we could find. With one exception they all have demonstrated significant deterrent effects with experimental designs using random assignment to experimental and control groups (the original Bullying Program involved a quasi-experimental design). All involve multiple sites and thus have information on replications and implementation quality, but not all replication sites have bene evaluated as independent sites, e.g., the Big Brothers Big Sisters mentoring program evaluation involved eight sites in a single aggregated analysis. Again, with one exception all selected programs have demonstrated sustained effects for at least one year post-treatment and several involve evidence effects for 15 years or more.

Additional Considerations for Funding Prevention Programs

When making legislative and policy decisions, there are important political and economic considerations, in addition to knowing about what works. The public is looking for quick, cheap and fail-safe solutions to the violence problem. There are none. Most of the successful programs, those that produce long-term sustained effects, involve long-term, intense interventions. The time required to overcome the negative influences of disadvantaged neighborhoods, dysfunctional families, poor school performance and delinquent gangs or peer groups, is measured in years not days or hours. The notion that we can address these long-established influences with 10 hours of passive conflict resolution training in the classroom is naive. Even a gun control policy may take a year or more before it is clear to potential users that this law is being enforced and there is some elevated risk in carrying a gun. Most of the model programs identified above are multiple year interventions, typically requiring 2-5 years.

Successful interventions are not cheap. The model programs involving residential treatment cost between $4,000 and $20,000 per youth per year; classroom interventions cost $600 -$1,000 per class for a multi-year intervention; the Big Brothers Big Sisters mentoring program costs about $1,000 per youth per year; and the nurse visitation program costs approximately $7,000 per family for the two and one-half year program.

Are these programs cost effective? An analysis by the Rand Corporation compared Quantum Opportunities, Multi-Systemic Therapy, and the Nurse Visitation program to the California Three-Strikes sentencing policy and concluded that all three were more cost effective than this option. A second cost analysis by the Washington State Institute of Public Policy examined the cost savings of 16 prevention

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programs, comparing the cost of the program with the criminal justice system costs avoided by the program's demonstrated reduction in crime. Five of the model programs were included in this analysis. Four programs (Multi-Systemic Therapy, Functional Family Therapy, Multidimensional Treatment Foster Care, and Big Brothers Big Sisters mentoring program) saved more money than they cost within a three year period. The Quantum Opportunity program cost more than it saved in justice system costs, but the benefits of this program, with higher graduation rates and higher employment rates, has other taxpayer benefits in reduced welfare and increased tax benefits that should be considered. In any case, not all prevention programs are cost effective, and this is an appropriate consideration in selecting programs to fund.

It is critical that the general public have some realistic notion of how much crime and violence is averted or prevented by these programs. Our most effective prevention programs achieve a 30-40 percent reduction in onset or offending rates compared to control groups or average rates. Even the best programs will have some failures; we should expect this and not abandon a good program when the media types a "sensational" failure and generalizes from a single case or two to the entire program.

It is important to note that doing something is *not* always better than doing nothing. We know some interventions have harmful effects. Agencies thus have a moral obligation to determine what effects a treatment, intervention or policy has on participants, particularly when participation is not voluntary. The frequently encountered resistance to spending money on evaluation because it limits the agency's service capacity always assumes the program effects are positive. This should not be assumed. In the interest of protecting our children and youth, programs must be evaluated and demonstrated to have no harmful effects. One way to deal with this potential problem is to include a 10 percent evaluation set-aside in all program and policy funding initiatives and to require some formal legislative oversight to insure that agencies implement programs and policies as they were designed. It is not necessary that every program funded be subjected to a rigorous outcome evaluation. For programs that have already been demonstrated effective, the critical issue is to insure that the replications are being implemented well. For types of programs not yet demonstrated to be effective, an independent outcome evaluation is essential and should be funded by the evaluation set-aside.

Finally, we are not recommending that communities invest all of their available resources in model programs. We need to develop and evaluate new programs to expand our knowledge of what works and to build an extensive repertoire of programs that work, if we are ever to mount a *comprehensive* prevention initiative in this country. At the same time, given the costs of evaluating programs (e.g., a minimum of a million dollars each for the above model programs), it makes sense for communities to build their portfolio of programs around interventions that have been demonstrated to work, and limit their investment in new programs to those they can evaluate carefully.

Summary

As we approach the 21st Century, the nation is at a critical crossroad: will we continue to react to youth violence after the fact, become increasingly punitive and lock more and more of our children in adult prisons; or will we bring a more healthy balance to our justice system by designing and implementing an effective violence prevention initiative as a part of our overall approach to the violence problem? We do have a choice. We have prevention programs and interventions that work and could design a much more effective, better balanced approach to the violence problem.

A core set of model programs that meet very high scientific standards for being effective prevention programs has been identified. These programs are our "blue chip" programs with demonstrated success in reducing violence. The number of model programs identified to date is small and we must continue to put a high priority on evaluating other programs and policies so as to add to their number. But these programs could constitute a core set of model programs in a national violence prevention initiative that could be implemented *now*. While a balanced portfolio of prevention programs may well include some more speculative or high-risk programs, we should include such programs only when

we are willing to evaluate them carefully. What remains is to insure that communities know about these programs and, should they desire to replicate them, have assistance in implementing them as designed. This is an appropriate role for the federal government. Given the cost of human lives, suffering the lost resources, there is some urgency. Let's begin now to design a more comprehensive, balanced and effective violence prevention and control initiative for this country.

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C. Research Related to Possible Futures for LRE

If LRE's history is any indication, its future is likely to be both varied and interesting. Thus, a section on possible futures for LRE might include a wide range of topics. Due to space constraints, however, we selected the three topics most commonly mentioned to us as important—conflict resolution/mediation, character education, and service learning. For each of these, we have selected the most comprehensive review of research that we could identify.

In the article on conflict resolution/mediation, David W. Johnson and Roger T. Johnson not only review and critique the research on the effectiveness of conflict resolution programs in U.S. schools, they also examine how such programs originated and the types of programs currently in place in schools.

The selected article on character education was written by James S. Leming. In it, he reviews the history of character education in the schools, describes contemporary character education programs, and reviews the research to date on the effects of character education. Leming calls for a "next step" that involves developing a "grand theory" of character education, followed by research based on that theory. Another piece of Leming's work of interest to LRE practitioners is "Civic Virtue: Common Ground for Character Education and Law-Related Education Professionals," in which he delineates what he sees as differences and commonalities between law-related education and character education (Leming 1996).

The final article in this section, on service learning, was written by Rahima C. Wade and David Warren Saxe. They, too, look at the history of their subject as well as the research on its effectiveness. They conclude with recommendations for further research. It is worth noting with respect to research on service learning that the Corporation for National Service has funded an assessment of selected Learn and Serve America school-based service programs. While the evaluation has still produced only "interim" results, those results are notable (Melchior 1997). The programs studied, which were selected because they were well designed, had significant positive effects on civic and educational development of participants. Students assessed the programs positively, expressing satisfaction with the service experience and recognizing the value of their service efforts and what they learned in related classroom activities. Finally, community agencies involved with the programs rated service provided by the students very highly.

Each of the articles included in this section contains a lengthy list of references, which we recommend as a starting place for more detailed study of these possible futures for LRE.

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Conflict Resolution and Peer Mediation Programs in Elementary and Secondary Schools: A Review of the Research

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Classroom teachers spend an inordinate amount of time and energy managing classroom conflicts (Amsler & Sadalla, 1987), which are often not managed well by students (McCormick, 1988; S. Miller, 1988) or by faculty (Schumpf, Crawford, & Usadel, 1991). The frequency and severity of conflicts seems to be increasing, so that for the first time ever, the category *fighting, violence, and gangs* has been found to be tied with *lack of discipline* for the biggest problem confronting local public schools (Elam, Rose, & Gallup, 1994). There are potentially numerous negative outcomes of poorly managed conflicts, including lower achievement and detrimental effects on individual students such as stress and challenges to self-esteem and self-efficacy. Partly in response to the increased conflict, there has been an increase in the number of conflict resolution and peer mediation programs in schools. The National Association for Mediation in Education (1994) estimated that there were approximately 2,000 conflict resolution programs in United States schools in 1992, but 5,000 to 8,000 such programs in 1994. In order to review what is known about the impact of such programs, it may be helpful to examine how they originated, the types of programs implemented, and the current state of the evidence validating their effectiveness.

Origins of Conflict Resolution Programs

Conflict resolution and peer mediation programs have their roots in four sources (D.W. Johnson & R. Johnson, 1995c): researchers in the field of conflict resolution, advocates of nonviolence, anti-nuclear-war activists, and members of the legal profession.

The research-based peer mediation programs began in the 1960s with the Teaching Students to Be Peacemakers Program (D.W. Johnson, 1970, 1991, 1997; D.W. Johnson & F. Johnson, 1997; D.W. Johnson & R. Johnson, 1979, 1995b, 1995c; D.W. Johnson, R. Johnson, & F. Johnson, 1976). It was derived from social interdependence theory (Duetsch, 1949; D.W. Johnson & R. Johnson, 1989; Lewin, 1951) and focused on teaching all students in a school the nature of conflict, how to use an integrative negotiation procedure and how to mediate peer conflicts. All students then took turns being a class and school mediator. A similar program was initiated by Morton Deutsch (1992) in the 1990s.

Nonviolence advocates, represented primarily by the Quaker Church, began a conflict resolution program in 1972, when Priscilla Prutzman directed a Quaker educational project in New York City with the purpose of teaching nonviolence to children. This project, known as the Children's Creative Response to Conflict, taught all students that the power of nonviolence lies in justice, caring, and personal integrity. Anti-nuclear-war activists are represented by the Educators for Social Responsibility, who in 1985 began the Resolving Conflict Creatively Program. The program includes (a) a 10-unit curriculum with lessons on intergroup relations, cooperative learning, and dispute resolution procedures, and (b) 20 hours of training in how to be a peer mediator. Finally, the legal profession became involved in President Carter's Neighborhood Justice Centers in the 1980s. Helena Davis wrote a conflict manager curriculum for training a cadre of peer mediators in elementary schools that was later extended and modified by Gail Sadalla (Sadalla, Holmberg, & Halligan, 1990). The training lasted for two days and focused on the role of mediator and basic communication skills. The program is known as the San Francisco Community Boards Conflict Managers Program.

Classifying Conflict Resolution Programs

There are at least three ways to describe conflict resolution and peer mediation programs in schools. First, the programs can generally be described as

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either cadre or total student body programs (D.W. Johnson & R. Johnson, 1995c). The cadre approach emphasizes training a small number of students to serve as peer mediators. The total student body approach emphasizes training every student in the school to manage conflicts constructively. Second, Levy (1989) and Maxwell (1989) divide conflict resolution programs into (a) curriculum-based programs that are designed to teach students about conflict and alternatives to violent conflict resolution and are preventive in nature (social skills, empathy training, stress and anger management, attitudes about conflicts, bias awareness) and (b) peer mediation programs.

Finally, Opotow (1991) divides conflict resolution and peer mediation programs into (a) skills-oriented approaches in which students are taught the interpersonal and small-group skills needed to resolve conflicts constructively (D.W. Johnson, 1997; D.W. Johnson & F. Johnson, 1997); (b) academically oriented approaches in which students can be taught the intellectual procedures and cognitive skills for managing conflicts such as academic controversy (D.W. Johnson & R. Johnson, 1979, 1995a), violence prevention (Prothrow-Stith, Spivak, & Hausman, 1987) and critical thinking (Paul, 1984; Seigel, 1988); and (c) structural change approaches which emphasize changing the school structure from a mass-manufacturing to a team-based, high-performance organizational structure (D.W. Johnson & R. Johnson, 1994) and providing a cooperative context for the management of conflict (Deutsch, 1973; D.W. Johnson & R. Johnson, 1994).

Lack of Evidence Supporting Use

The popularity of conflict resolution and peer mediation programs has resulted in numerous articles reporting claims about the programs' impact. The articles tend to provide (a) purely descriptive, anecdotal accounts of the programs' impact on various dependent variables (Davis & Porter, 1985; Edleson, 1981; Levy, 1989) and (b) descriptions of curriculum design and guidelines for developing a conflict resolution or peer mediation program. Broad claims such as "School mediation programs have proven themselves beneficial to students, the school community and the community as a whole" (Davis & Porter 1985, p. 28) and "The obvious beneficial results of conflict resolution programs will ensure future expansion" (Levy, 1989, p. 80) are presented but not supported by actual research data. Anecdotal reports such as quoting a student as saying, "Mediation pulled me out of the hole I was in; I'm a better person" (Davis & Porter, 1985, p. 26) are inspiring, but do not illuminate what peer mediation programs are doing, how they are doing it, and how broadly their effects can be generalized. Other articles describe what mediation looks and sounds like (Koch & Miller, 1987).

Given (a) the popular and widespread use of conflict resolution and peer mediation programs and (b) the frequent testimonials about their effectiveness, a current assessment is needed of the quality and quantity of knowledge about their effectiveness. Directions for future research in this important but understudied area can then be determined. The purpose of this article is to provide such an assessment by reviewing

(1) the nature of conflict in schools,

(2) the need to establish a cooperative context for conflict,

(3) the strategies students use to resolve their conflicts before and after conflict resolution and peer mediation training, and

(4) the outcomes that result when untrained and trained students resolve their own conflicts.

Finally, a critique of the research and a discussion of the state of the area will be presented.

The Nature of Conflicts in Schools

Conflict resolution and peer mediation programs are often promoted as a way to reduce violence (and destructively managed conflicts) in schools. There is, however, disagreement over how much in-school violence actually occurs. One position is that schools are a microcosm of society and that the violence in society is brought into the schools. Another position is that schools are safe havens from the violence in society and that, in fact, very little violence occurs in schools. The resolution to this controversy lies in understanding the nature of conflict of interests, the theoretical perspective on conflict in school settings, the logic of two positions (school as microcosm of

society versus school as safe haven), and the data on the types of conflicts that actually occur in schools.

Nature of Conflict of Interests

The better educators and students understand the nature of conflict, the better able they are to manage conflicts constructively. *Conflict* is a relationship variable, involving two or more sides. There are various types of conflict, including controversy (D.W. Johnson & R. Johnson, 1979), conceptual conflict (D.W. Johnson & R. Johnson, 1995c), and conflict of interests (Deutsch, 1973). While all conflict may be defined as a state of incompatible behaviors (Deutsch, 1962, 1973; D.W. Johnson, 1970), a conflict of interests occurs when the actions of one person attempting to reach his or her goals prevent, block, or interfere with the actions of another person attempting to reach his or her goals (Deutsch, 1973). This review focuses on how students resolve conflicts of interests in school settings.

Deutsch's (1973) definition of conflict of interests makes it possible to distinguish conflict from a number of related concepts such as competition, aggression, influence, and dominance. While *competition* (which involves working against other individuals to achieve a goal that only one or a few can attain) and *aggression* (which involves behaviors aimed at harming another person) produce conflict, not all instances of conflict reflect competition or aggression. *Influence* deals with affecting others in desired ways, and *dominance* deals with one-way influence from, for example, teacher to students. When conflict is confused with these related concepts, it is associated with extreme behaviors present in only a small fraction of actual disputes.

In addition to conflict, a few related terms need to be defined. *Negotiation* is a process by which persons who have shared and opposed interests and want to come to an agreement try to work out a settlement (D.W. Johnson & F. Johnson, 1997). There are two major approaches to negotiation: distributive and integrative (D.W. Johnson & F. Johnson, 1997; Walton & McKersie, 1965). The *distributive* approach is based on the belief that gains for the other can be achieved only at one's own expense and that a person's actions are therefore aimed at maximizing one's own gains at the expense of the other. The *integrative* approach is aimed at maximizing the gains of both oneself and the other. In cooperative contexts in which relationships are ongoing, such as families and schools, the integrative approach results in the most constructive outcomes. When a third party helps disputants negotiate, it is known as *mediation*. Mediation is a structured process in which a neutral and impartial third party (known as the *mediator*) assists two or more people in negotiating an integrative resolution to their conflict (D.W. Johnson & R. Johnson, 1995c).

Theoretical Perspectives on Conflicts in Schools

The use of conflict resolution and peer mediation programs in the schools is a classic example of practice being developed largely separate and apart from the relevant theory and research. The programs originated by nonviolence advocates, anti-nuclear-war activists, and lawyers were developed on models other than the theories of conflict. This separation from theory makes it difficult to assess the effectiveness of such programs.

While most educators are concerned about the potentially destructive outcomes (such as violence) from conflicts in schools, most theories of conflict posit that conflict is a necessary and positive aspect of human development and relationships. There are numerous theoretical perspectives on conflict, but most of them can be represented as either human development theories or social psychological theories.

Developmental theories include psychoanalytic theory and cognitive developmental theory. Psychoanalytic theory posits that conflicts with and detachment from parents are a healthy necessity for encouraging individuation, realigning relationships, and reducing anxieties (Blos, 1979; Freud, 1958). A person develops in a family characterized by loving and committed relationships with parents. As the person matures, family relationships are disrupted, conflicts ensue, and the person withdraws and establishes alternative caring and committed relationships with peers that replace the close ties with parents. Cognitive developmental theory posits that conflicts resulting from intellectual maturation spur revisions

in understanding of the self and relationships (Piaget, 1932/1965). Conflict is the mechanism by which children and adolescents acquire new cognitive structures, developing new perspectives and stagelike shifts in patterns of reasoning which result in changes in behavior toward parents and peers. The new behavior patterns create new conflicts, as roles and normative expectations are renegotiated. Negotiation is thus viewed as requiring advanced states of reasoning and being the most cognitively sophisticated conflict resolution strategy (Selman, 1981; Smetana, 1989; Youniss, 1980).

Three social psychological theories are social interdependence theory, structure-process-attitude/behavior theory, and dual concerns theory. Social interdependence theory posits that conflicts are inherent in all social relationships, and the way in which they are managed depends on the nature of the social interdependence existing in the situation (Deutsch, 1949, 1962, 1973; D.W. Johnson, 1970, 1974; D.W. Johnson & R. Johnson, 1979, 1989; Tjosvold, 1986). Structuring a situation cooperatively (individuals working together to achieve mutual goals) results in promotive interaction (individuals acting to promote each other's goal achievement), which creates constructive and healthy resolutions of conflicts. Structuring a situation competitively (individuals working against each other to achieve an exclusive goal) results in contrient or oppositional interaction (individuals acting to obstruct each other's goal achievement), which creates destructive and unhealthy resolutions of conflicts. In individualistic situations, where individuals work in isolation to achieve personal goals, no interaction tends to occur, and there are therefore no conflicts, as individuals ignore each other's goal achievement and see it as irrelevant to their own success. These causal relationships are bidirectional (a cooperative structure results in promotive interaction, and promotive interaction tends to create a cooperative structure). The structure and the interaction patterns tend to be consistent. What determines whether promotive or oppositional patterns of interaction occur is the perception of the context of the conflict, not the actual context (two individuals can perceive themselves to be in competition and act accordingly when in fact they are not). Conflicts are resolved constructively when they (a) result in an outcome that all disputants are satisfied with, (b) improve the relationship between the disputants, and (c) improve the ability of disputants to resolve future conflicts in a constructive manner (D.W. Johnson, 1970; D.W. Johnson & R. Johnson, 1995c).

Closely related to but somewhat broader than social interdependence theory, structure-process-attitude/behavior theory, based on Kurt Lewin's (1948, 1951) field theory, posits that the structure of a situation determines the processes of interaction, which determines the attitudes and behaviors of the individuals involved (Watson, 1966; Watson & Johnson, 1972). The structure of the situation contains the role definitions and normative expectations that define what are appropriate and inappropriate ways for individuals to interact with each other in the situation, as well as other situational influences, such as the number of people involved, spatial arrangements, hierarchy of prestige, social sanctions, power, and nature of activities to be conducted. Changes in any or all of these factors lead to changes in the processes of the system and the interactions of the members, which subsequently change the attitudes and behavior of the individuals involved. Patterns of behavior that lead to constructive or destructive resolutions of conflicts, therefore, result from the way the situation is structured.

Finally, dual concerns theories, such as conflict strategies theory (D.W. Johnson, 1991; D.W. Johnson & F. Johnson, 1997), posit that there are two major concerns in conflict resolution: (a) concern about reaching one's goals and (b) concern about maintaining an appropriate relationship with the other person. Both goals and relationships can range from unimportant to very important. The degree of importance determines which of five strategies a person uses to resolve a conflict: (a) integrative, problem-solving negotiations (used when both the goal and the relationships are highly important), by which an agreement is sought that ensures that both parties fully achieve their goals and that any tensions and negative feelings are resolved; (b) compromise (when both the goal and the relationships are moderately important, and it appears that the disputants cannot get what they want), in which the disputants give up part of their goals and sacrifice part of the relationship in order to reach an agreement; (c) smoothing (used when the goal is of no importance

but the relationship is of high importance), in which the disputant gives up his or her goals in order to maintain the relationship at the highest quality possible; (d) withdrawing (when neither the goal nor the relationship is important), in which the disputant gives up both the goal and the relationship and avoids the issue and the other person; and (e) forcing or distributive, win-lose negotiations (used when the goal is very important but the relationship is not), in which the disputant seeks to achieve his or her goal by forcing or persuading the other to yield. There are situations in which each strategy may be appropriately used. In any conflict, constructive outcomes depend on the individuals' ability to diagnose the importance of their goals and relationship and act accordingly. The most complex and constructive strategy for individuals to learn is integrative negotiation. Dual concerns theory, which has its origins in Blake and Mouton's (1964) managerial grid, has been adapted by various authors (Filley, 1975; D.W. Johnson & F. Johnson, 1997; Rahim, 1983; Thomas, 1976).

The various theories of conflict posit that conflict is a necessary and positive condition for development and growth of children and adolescents, and schools should therefore encourage and promote conflict and be conflict-positive rather than conflict-negative organizations (D.W. Johnson & R. Johnson, 1995c). Yet the fear of conflict resulting in violence is widely present. The sources of anxiety may include the knowledge that (a) the level of violence and destructively managed conflict in communities seems far greater than the positive impact of schooling, (b) so little is known about the types of conflicts that occur in schools and how they are managed, and (c) very few of the conflict resolution and peer mediation programs being implemented in schools are directly based on a theoretical model.

School as a Microcosm of Society

The proponents of the position that schools have become violent places point to the increase of violence among children and adolescents in society. The *Carnegie Quarterly* reported that between 1985 and 1994, nearly one million adolescents between the ages of 12 and 19 were victims of violent crimes each year. Youth are more often the victims of violence, and intentional injuries to youth are more frequent and more lethal than any other age group (Centers for Disease Control, 1992). The adolescent homicide rate has more than doubled in the last 7 years, and youth violence is currently the leading preventable cause of death for adolescents (Elliott, 1994). The Centers for Disease Control reported that from 1982 to 1992, juvenile arrests for homicide increased 228% and that the homicide rate among males aged 15 to 19 more than doubled between 1985 and 1991. Teenage males are now more likely to die from gunshot wounds than from all natural causes combined. The violence in many communities is so frequent that they have become what criminologists have described as criminogenic communities—places where the social forces that create predatory criminals are far more numerous and overwhelmingly stronger than the social forces that create virtuous citizens. Children in these (usually inner-city) communities typically grow up surrounded by teenagers and adults who are themselves deviant, delinquent, or criminal. Even in the safest upper-middle-class suburban schools, extreme incidents of sexual assault or use of a gun occasionally happen and must therefore be treated as possibilities. The reasoning of many individuals is that schools reflect what is occurring in our culture and that because certain communities are filled with violence and almost all communities are touched by violence, both physical and verbal violence (in the form of name calling, insults, pushing, shoving, and fighting) will be a common daily occurrence in schools (Stop the Violence, 1994).

Schools as Safe Havens

Another view is that the frequency of violence in schools is overstated and that, in fact, schools represent somewhat safe havens from the violence in the community. Opotow (1991) interviewed 40 inner-city seventh graders (50% male; 52% Hispanic, 43% Black, 5% White) and found that when asked about conflicts with peers, more than two thirds of the students described conflicts that occurred in school, and the in-school conflicts were described as being violent. However, Opotow also found that in fact the fights were most often infrequent scuffles that caused no or only minor injury and that the fights were neither frequent nor routine occurrences (fewer than one quarter of the conflicts occurred within a month of the interview, another quarter occurred

during the present school year, and half were 2 to 4 years old). The Joint Commission on Integrity in the Public Schools conducted an undercover investigation in select New York City schools that was expected to yield high rates of violence and found that essentially all violence and drug use ascribed to students occurred after school or was initiated by nonstudents (Lee, 1990). Garofalo, Siegel, and Laub (1987) analyzed the National Crime Survey for school-related victimizations among adolescents and found scuffles, threats, and disagreements rather than calculated assaults or violence, even though the data were skewed toward extreme incidents reported to the criminal justice system. Forty percent of the weapons used in conflicts were available items grabbed on the spur of the moment, such as rocks, baseball bats, metal bars, spray paint cans, scissors, or screwdrivers. Resulting injuries were relatively minor bruises, black eyes, cuts, scratches, and swellings. The overall picture of school violence may be one of teasing, bullying, and horseplay that gets out of hand.

What these researchers suggest is that violence is overemphasized in school conflicts because there is a negativity bias (conflicts that involve anger and violence are more salient and more likely to be remembered) in reporting conflicts in schools. While negative affect may or may not be present in a conflict, when students are asked to complete questionnaires, interviewed, or asked to recall past conflicts (from 2 weeks to months), they tend to confuse anger, fighting, and quarreling with conflict (Hill, 1988; Hill & Holmbeck, 1987; Prinz, Foster, Kent, & O'Leary, 1979; Robin & Foster, 1984; Silverberg & Steinberg, 1990; Smetana, 1989; Steinberg, 1987, 1988). Conflicts that involve anger and violence, furthermore, are more salient and more likely to be remembered, and the incidence of actual conflict therefore tends to be underestimated (Collins & Laursen, 1992). Because of the negativity bias, the frequency of violence in schools may be overestimated and overemphasized. In fact, schools may be relatively safe havens in criminogenic communities. In addition, most school-age children perceive their conflicts as neither noxious nor harmful to their relationships (Laursen, 1992; Laursen & Collins, 1994).

The answer to the question of whether schools are increasingly violent places or somewhat safe havens from community violence lies in the data on the nature and frequency of conflicts in schools.

Types of Conflicts in Schools

The controversy over whether schools are becoming increasingly violent places or whether the violence in schools is overstated points out how little documentation exists about the nature and frequency of actual conflicts in natural settings such as schools. Over 15 studies have examined the nature of conflict in schools, either by documenting the types of conflicts reported in the student body as a whole or by documenting the types of conflicts brought to peer mediation. In this section, these studies will be reviewed and critiqued.

D.W. Johnson, R. Johnson, Mitchell, et al. (In press), in a study of a peer mediation program in an inner-city, lower-class, minority primary (prekindergarten through 4th grade) school during the 1990-1991 academic year, found that violence seems to occur frequently among the young children. Eighty-five percent of the conflicts referred to peer mediation involved physical fights and verbal insults. D.W. Johnson, R. Johnson, Cotten, Harris, and Louison (1995), in a study of the same school during the 1991-1992 academic year, found that 81% of the conflicts involved relationship problems characterized by physical aggression (hitting, kicking, scratching, and pushing) and verbal aggression (name calling, insults, and threats).

Jones and Carlin (1994) evaluated a peer mediation program in which 719 students in grades 5 through 12 and adults from 29 Philadelphia schools received training. The majority of the conflicts referred to mediation involved verbal disagreements, physical fighting, and rumors. The duration of the conflicts ranged from very short to longer than 1 month. Roush and Hall (1993), in a study on peer mediation, found that of the 52 conflicts brought to peer mediators, over 50% were pending fights (8% of which could not be resolved through mediation), and the other 50% were (a) arguments and harassments or (b) gossip and name calling. Burrell and Vogl (1990) conducted an evaluation of a peer mediation program at the middle school and high school

levels in the Milwaukee public school system. The types of cases referred to mediation were rumors, stolen property, or boyfriend-girlfriend disputes. In one high school during the 1986-1987 school year, the 69 conflicts mediated centered on threats of physical force (30), harassments (21), rumors (7), minor assaults (7), property loss or property disputes (3), and racial incidents (1).

Araki (1990), in a 2-year study on a peer mediation project implemented in a high school, an intermediate school, and an elementary school, in the Honolulu school district in Hawaii, found that the types of conflict with the highest occurrences were gossip/rumor (27%), harassment (27%), arguments (20%), and classroom behavior (9%). For female disputants the most frequent conflicts involved gossip/rumors, while the most frequent conflicts for male disputants involved harassment. In Ohio schools the most frequently reported conflicts involved friends, name calling, dating, rumors, and disrespect (Ohio Commission on Dispute Resolution and Conflict Management, 1993). Stern and Van Slyck (1986) found frequently occurring conflicts in middle school to be gossip and rumors, dating/friendship relationship issues, and harassment. Frequently mediated conflicts also included arguing and fighting (Conbere, 1994). Schumpf et al. (1991) reported that of 245 conflicts referred to peer mediators in a Midwestern middle school of approximately 1,000 students (25% African American, 70% Caucasian, 5% Asian), 26% involved name calling, 23% involved rumors, 16% involved hitting and fighting, and the other 35% involved a wide variety of issues. Cameron and Dupuis (1991), at a high school in New Zealand, found that 36% of the conflicts brought to mediation primarily were hassling, name calling, hitting, and teasing, 11% involved fighting and bullying, 11% involved student misbehavior in class, 10% involved rumors and misunderstandings, and 8% involved property damage or loss. The other 24% were scattered among a variety of other issues. Overall, 53% of the conflicts occurred among eighth graders.

There are a series of studies on the conflicts occurring in the student body as a whole in suburban, middle-class schools. D.W. Johnson, R. Johnson, and Dudley (1992), in a study in an elementary school (Grades 1-6), found that the most frequent conflicts involved put-downs and teasing (36%), followed by playground conflicts (22%) and access or possession conflicts (19%). Only 12% of the conflicts involved physical aggression. D.W. Johnson, R. Johnson, Dudley, and Acikgoz (1994), in another elementary school, studied third- through sixth-grade students and found that the most frequently occurring conflicts involved physical aggression (33%), playground disputes (25%), and access or possessions conflicts (18%). D.W. Johnson, R. Johnson, Dudley, Ward, and Magnuson (1995) conducted a study of second- through six-grade students' conflicts in school and in their homes. The total number of conflicts reported was 783, with 209 conflicts in school and 574 conflicts at home. More types of conflicts were reported at school than at home. Conflicts over preferences or values and possession or access were more frequent in the home than in school. Physical fights and verbal insults made up 25% of the conflicts at school but only 8% of the conflicts at home. Very few conflicts occurred over academic work in either setting.

MacDonald and da Costa (1996) surveyed 231 seventh-, eighth-, and ninth-grade students from five central Alberta junior high schools. They found that the conflicts reported, in order of frequency, were (a) teasing, swearing, name calling; (b) verbal threats; (c) things damaged or stolen; (d) pushing, hitting, grabbing; (e) physical fights; (f) bullying; (g) being spat upon; (h) ethnic conflict; (i) sexual harassment; and (j) threats with weapons. They concluded that students may be increasingly accepting violence as part of their schooling experience, and the data reported was largely based on observation, not personal experience.

At least 15 studies on the types of conflicts that students face in schools have been conducted. The studies involved both self-reports from students and documentation of the conflicts that were brought to peer mediators. Although the studies occurred in elementary, middle, and high schools and in a variety of inner-city and suburban school districts, the results are fairly consistent. Common types of conflicts in schools are verbal harassments (name calling, insults), verbal arguments, rumors and gossip, physical fights, and dating or relationship issues. There may be more physical and verbal aggression in urban than in suburban schools. The physical

violence that was documented almost never involved serious altercations or violations of law. The alarm about violence in schools, therefore, does not seem to be fully justified, but educators should be concerned about the frequency with which students manage their conflicts in destructive ways.

There are at least four major problems with these studies. The first problem is that while the studies do identify various types of conflicts, the findings are atheoretical and therefore are hard to summarize and have limited meaning. One of the few typologies of conflict that allow for theoretical analysis was created by Morton Deutsch (1973), who differentiated among conflicts based on (a) control over resources, (b) differences in preferences, (c) differences in values and beliefs, and (d) differences in goals for the relationship. In an inner-city primary school, over 85% of the conflicts referred to peer mediation involved relationship issues (D.W. Johnson, R. Johnson, Cotten, et al., 1995; D.W. Johnson, R. Johnson, Mitchell, et al., in press); in a suburban elementary school (Grades 1-6), by contrast, only 20% of the conflicts involved relationship issues, and the majority of conflicts were over control of resources (37%) and preferences (31%) (D.W. Johnson, R. Johnson, Dudley, Ward, & Magnuson, 1995). Value conflicts were almost never reported by these elementary-age children.

The second problem is that studies based on a broad and representative sample of students are clearly missing. Most of the existing studies recorded only the conflicts that were brought to mediation. The few studies that focused on a broader sample used only the classes participating in a conflict resolution and peer mediation training program. The third problem is the lack of recording all conflicts that occurred in school. When students recall their conflicts over an expansive period of time (1 week or more), the report of typical disputes diminishes, and only a few more dramatic conflicts are reported.

The fourth problem is that while the nature of conflicts has been documented, the more helpful analyses of the triggering events that spark conflict and the barriers that prevent it from occurring have yet to be conducted (D.W. Johnson & F. Johnson, 1997). None of the studies, for example, examined factors that influence aggressive behavior, such as arousal, situational cues, and modeling. There is general agreement that the psychological experience of arousal contributed strongly to aggression (Berkowitz, 1989). Arousal typically accompanies frustration and anger, but also results when individuals misattribute arousal resulting from extraneous and irrelevant factors such as crowding, temperature, erotica, and exercise to an interpersonal event and engage in aggressive behavior. The physical and psychological conditions of many schools may provide fertile ground for such misattributions. Researchers studying the impact of situational cues on aggression conclude that the presence of cues typically associated with aggressive behavior (such as weapons) elevate the propensity for violence (Berkowitz & LaPage, 1967; Carlson, Marcus-Newhall, & Miller, 1990). Research on modeling indicates that in any situation, individuals look for cues about appropriate behavior, and if they see others acting aggressively, they are likely to engage in aggression themselves (Bandura, Ross, & Ross, 1961). While educators need to know what types of conflicts actually occur in schools, the in-depth analysis of triggering events and barriers to destructive or constructive behavior would be far more interesting and valuable.

Although the alarm about violence in schools may be overstated, the serious concern is justified about how students manage their conflicts. In the community, violence has been known to occur as a result of a look, comment, or random event. As social interdependence theory states, the type of conflict may not be nearly as important as the way in which the conflict is perceived and interpreted (Deutsch, 1973). As long as a look is interpreted as disrespect and disrespect is considered a serious enough issue to kill over, then concern about students' safety in school seems justified. Two issues that may influence the perceptions of conflicts are the context in which the conflict occurs and the strategies students use to resolve their conflicts.

The Context of Conflict: Cooperative or Competitive

Among the most important contributions of social interdependence theory are three propositions. The first is that conflict can have destructive or

constructive outcomes (it hold both peril and promise). The second is that whether destructive or constructive outcomes occur depends on whether (a) conflict takes place within a cooperative or a competitive context and (b) the strategies disputants use are congruent or incongruent with the context of the conflict. The third (and perhaps the most unique and important) is that conflict is ever present and a necessary aspect of cooperative efforts. We may agree on the goals, but be in conflict over how to reach them. It is quite possible, for example, to agree to travel from Minneapolis to Chicago but have intense conflict over how to travel (car, train, or plane), when to leave, and what to take. In a cooperation situation, individuals work together to achieve mutual goals (Deutsch, 1962, 1973; D.W. Johnson & R. Johnson, 1989). When one person achieves his or her goal, all others involved also achieve their goals. Cooperation is the key to constructive conflict resolution on two levels (Deutsch, 1962, 1973; D.W. Johnson & R. Johnson, 1989, 1995b, 1995c).

First, cooperation is the state that conflict resolution procedures seek to restore. By definition, the resolution of a conflict is only constructive if the disputants can coordinate their efforts to maximize joint gain and establish a relationship that allows them to work together cooperatively in the future.

Second, cooperation provides a context that influences the course of conflict resolution efforts by focusing participants on long-term integrative rather than short-term distributive strategies and resolutions. When conflicts occur in an ongoing cooperative context (such as a family, career organization, community, society, world), conflict tends to be constructive, because disputants recognize that their long-term interests in their future ability to work together is more important than their immediate interests in the issue in dispute. There is considerable evidence, for example, that the more cooperative the relationship, (a) the more frequently conflicts occur, (b) the more conflicts are managed with low negative affect, (c) the greater the explanations and criticisms present in the exchange and the more frequent the use of problem-solving and integrative strategies, and (d) the greater the change in positions and reasoning (towards a more mature level) and the more social interaction is continued and relationships strengthened and improved (Deutsch, 1973; Hartup, 1992; Hartup & Laursen, 1993; D.W. Johnson & R. Johnson, 1979, 1989, 1995a; Laursen, 1993; Laursen & Collins, 1994; Nelson & Abopoud, 1985). A cooperative context tends to both elevate the frequency of conflict and increase the likelihood that constructive strategies will be used and constructive outcomes will result. Within cooperative situations, the following are generally true (Deutsch, 1962, 1973; D.W. Johnson, 1974; D.W. Johnson & R. Johnson, 1989):

(1) The communication of relevant information tends to be open and honest, with each person interested in informing the other as well as being informed. Communication tends to be more frequent, complete, and accurate.

(2) Perceptions of the other person and the other person's actions tend to be accurate and constructive. Misperceptions and distortions occur less frequently and are easier to correct and clarify.

(3) The relationship is characterized by trust and responsiveness. Individuals trust and like each other and are therefore willing to respond helpfully to each other's wants, needs, and requests.

(4) Individuals recognize the legitimacy of each other's interests and search for a solution accommodating the needs of both sides. Conflicts tend to be defined as mutual problems to be solved in ways that benefit everyone involved.

Most schools are dominated not by cooperation but by competition (D.W. Johnson & R. Johnson, 1989, 1994). In a competitive situation, individuals work against each other to achieve a goal that only one or a few can attain (Deutsch, 1962; D.W. Johnson & R. Johnson, 1989). One can attain his or her goal if and only if the other people involved cannot attain their goals. Competition is based on scarcity; students are often supposed to compete, for example, for rewards that are restricted to only the few who perform best. Competitors, therefore, seek outcomes that are personally beneficial but detrimental to all others in the situation. Within competitive situations, individuals typically have a short-term time orientation and focus their energies on winning, paying little or no attention to maintaining a good relationship. Conflicts may be associated

with lingering anger and discontinued social interaction (Deutsch, 1973; Hartup, 1992; D.W. Johnson and R. Johnson, 1974, 1989; Laursen, 1993). In competitive situations, the following are generally true (Deutsch, 1962, 1969, 1973; D.W. Johnson, 1974; D.W. Johnson & R. Johnson, 1989):

(1) Communication tends to be avoided or tends to contain misleading information and threats. A competitor tends to delude and mislead the other person about his or her interests while striving to obtain information the other is unwilling to disclose.

(2) There are frequent and common misperceptions and distortions of the other person's position and motivations; these misperceptions and distortions are difficult to correct.

(3) The relationship is characterized by distrust and exploitation. Individuals have a suspicious, hostile attitude toward each other that increases their readiness to refuse each other's requests and exploit each other's wants and needs.

(4) Each individual tends to deny the legitimacy of the other person's wants, needs, and feelings and strives to maximize his or her own gain at the other's expense. Only one's own interests are considered.

The procedure used to manage a conflict and the context in which the conflict occurs can be congruent or incongruent. When the context and the conflict resolution procedure are congruent (an integrative procedure used in a cooperative context or a distributive procedure used in a competitive context), conflicts may tend to be managed more easily. When the context and the conflict resolution procedure are incongruent (an integrative procedure used in a competitive context or a distributive procedure used in a cooperative context), managing conflicts may tend to be more difficult, and destructive outcomes may tend to result. When conflict resolution and peer mediation programs are implemented in the existing competitive, individualistic context of schools, their effectiveness can be severely compromised (D.W. Johnson & R. Johnson, 1994, 1995c). In order to teach students how to seek solutions to problems rather than "win," educators must create a cooperative context in the classroom and school. The easiest way to do so is for teachers to structure learning situations cooperatively for 60% to 80% of the time (D.W. Johnson, R. Johnson, & Holubec, 1993). Since cooperative learning increases achievement and promotes a number of other important instructional outcomes (D.W. Johnson & R. Johnson, 1989), there will be little objection to doing so.

Strategies Used to Resolve Conflicts

The strategy used to resolve a conflict has been found to be a better predictor of the outcomes of the conflict than is the type of conflict or the frequency with which the conflict occurs (Gottman, 1979; Laursen & Hartup, 1989). We reviewed the strategies children and adolescents use to resolve their conflicts in school. The studies examining the strategies used by untrained students are divided into the following categories: general, conflict strategies theory, distributive versus integrative negotiations, level of cognitive development, gender, and what students should learn. The studies examining the strategies used by trained students are divided into the following categories: learn negotiation and mediation procedures, retaining the procedures, transferring the procedures, conflict strategies theory, distributive versus integrative negotiations, and strategies used by faculty and staff. The basic results are summarized in Table 1.

Conflict Strategies Used by Untrained Students

General Studies. A number of studies have documented the range of strategies used by untrained students to resolve their conflicts. The most comprehensive study was conducted by DeCecco and Richards (1974) nearly 20 years ago. In their interviews of more than 8,000 students and 500 faculty members in more than 60 junior and senior high schools in New York, Philadelphia, and San Francisco, they found that over 90% of the conflicts reported by students were perceived to be (a) unresolved or (b) resolved by avoiding the conflict or by overpowering the opposition. Decisions were imposed by school authorities 55% of the time. Open negotiation of conflicts occurred in only 17% of the conflicts.

Krappmann and Oswald (1987) conducted naturalistic observations of 34 German schoolchildren of ages 6 through 12 in order to gain an understanding of how children manage conflicts. Conflict strate-

TABLE 1: Strategies Students Use in Conflicts

Untrained students	Trained students
Withdrawal, suppression	Face conflict
Force/coercion, intimidation	Learn procedures
Distributive (win-lose) negotiations	Retain procedures
	Apply procedures
	Transfer to nonschool, nonclassroom conflicts
	Problem solving
	Integrative negotiations

gies were coded into three patterns: (1) coercion and manipulation, (b) offer and reply, and (c) reasoning. A substantial percentage of the students relied upon coercion and manipulation; in more than half of the conflicts, at least one student used coercion. There was very little perspective taking. In the 455 conflicts observed, the feelings or self-image of one or both of the disputants was reported as being hurt. The 10- to 12-year-old students rarely used reasoning in resolving their conflicts.

D.W. Johnson, R. Johnson, and Dudley (1992), in a study of first- through sixth-grade students in a suburban, middle-class elementary school, found that the untrained students typically used the strategies of telling the teacher (61%), repeating the request, and arguing for what one wants. D.W. Johnson, R. Johnson, Dudley, and Acikgoz (1994), in a study of third- through sixth-grade students in a suburban, middle-class elementary school, found that before training the most frequently used strategies were telling the teacher (51%), withdrawal (15%), and repeated requests (15%). D.W. Johnson, R. Johnson, Dudley, and Magnuson (1995), in a study of second- through fifth-grade students in a suburban, middle-class elementary school, found that before receiving training, students tended to repeat commands, tell the teacher, and withdraw.

Peterson and Peterson (1990) found that both children and adults in schools either avoided conflict or confronted the other person. Avoidance was used twice as often as confrontation. Higgins and Priest (1990), in a survey of 103 teachers in 24 secondary schools in England, found that conflicts in schools were resolved by inhibiting, ignoring, arbitrating, and mediating. Mild (1990) conducted a survey of 178 students in grades 3 through 8 (two classes at each grade level). Students were asked to indicate which strategy they would use to resolve a conflict with a peer and with a teacher. The alternatives were physical separation, invocation of rules, mediation by equal, mediation by superior, role reversal, and mutuality of concern. No significant differences in responses were found across grade levels. Mediation by another student was among the least preferred of the strategies. When faced with a teacher-student conflict, students expressed a greater preference for mutuality of concern, mediation by a superior, and invocation of rules.

Opotow (1991) concluded from her interviews of inner-city seventh graders that the students lacked the skills to manage their conflicts in constructive ways and were limited to two extreme reactions—fight or flee. The students tended to (a) engage in ritualized posturing, (b) not explore ways to integrate the interests of disputing parties, and (c) act out their anger rather than describing or explaining it. Ninety-five percent (38) of her respondents engaged din inward retreat ("hold anger in," "act like nothing happened," "don't talk with them") or emotional outbursts ("scream, yell insults, stomp feet"). Opotow concluded that these students were virtually unable to communicate their feelings, exchange information with their opponents, or explain their concerns in a conflict; problem solving, therefore, was practically nonexistent. The strategies students used

were typically reactive rather than thoughtfully selected.

What these studies indicate is that untrained students of all ages rely on withdrawal and suppression of conflicts, the use of aggression for coercive purposes, or telling the teacher so that the teacher will coerce the other into conceding. In almost no case did students use integrative negotiation procedures or strive to solve the problem on which the conflict was based. In most of these studies, however, there are methodological problems that make their conclusions tentative. In almost every study, self-report data was collected through questionnaires and interviews. Only Krappmann and Oswald (1987) conducted naturalistic observations of how students actually behave. When students are asked to describe how they manage their conflicts, their responses are subject to bias; the self-report nature of the data therefore makes conclusions very tentative.

In addition to these studies, a number of studies have been conducted on conflict strategies theory, distributive versus integrative negotiations, cognitive developmental theory, and gender and conflict resolution.

Conflict Strategies Theory. There are a number of studies that examined the impact of the conflict resolution and peer mediation training on students' use of the five conflict strategies specified by the two concerns inherent in conflict. D.W. Johnson, R. Johnson, Mitchell, et al. (in press), in their study of primary inner-city students, found that 97% of the conflicts mediated initially involved forcing. Integrative negotiations were never used. In the following year, D.W. Johnson, R. Johnson, Cotten, et al. (1995) found that 100% of the conflicts mediated in this school involved physical and verbal forcing. D.W. Johnson, R. Johnson, Dudley, Ward, and Magnuson (1995) found that before conflict resolution and peer mediation training in a suburban elementary school, the second- through fifth-grade students studied tended to use forcing, withdrawal, and compromising strategies in resolving their conflicts. Students never used integrative negotiations. In a suburban school district in Canada, Stevahn, Johnson, Johnson, Green, and Laginski (in press) found that untrained high school students almost exclusively used verbal forcing to resolve their conflicts; Stevahn, Johnson, Johnson, and Real (1995) found that untrained students primarily used forcing and withdrawal to resolve conflicts; and Stevahn, Johnson, Johnson, Laginski, and O'Coin (1995) found that 95% of the untrained students used forcing to resolve conflicts. In a Midwestern suburban middle school, D.W. Johnson, R. Johnson, Dudley, Mitchell, and Frederickson (in press) found that untrained sixth- through ninth-grade students used forcing, withdrawing, and smoothing to resolve their conflicts. Thus, before training, students tended to be highly goal oriented and chose strategies that focused on downplaying the relationship and either giving up their goals or achieving them at all costs. Part of the stress generated by conflicts in schools may be due to students' knowledge that they have acted in ways that damaged their relationships and yet have to face each other day after day in class and in the hallways.

In other studies in which the data are easily interpretable by conflict strategies theory, students have been found to use withdrawing and forcing (DeCecco & Richards, 1974; McCormick, 1988), withdrawing (inhibiting or avoiding; Higgins & Priest, 1990), forcing (coercing or manipulating; Krappmann & Oswald, 1987), and withdrawing (avoiding) or forcing (Peterson & Peterson, 1990). Roderick (1987) and Einstein-Goldstein (1985) state that most students think their only choices when faced with a conflict are to attack and to withdraw. Laursen (1993) conducted a meta-analysis of 12 studies of adolescent conflict management. Across all relationships, approximately 23% of adolescents' conflicts were resolved by compromise (concessions made by both parties), whereas 37% were resolved by forcing or submission (winning or acceding to the demands of the other) and 40% by withdrawal/disengagement (refusing to continue, perhaps by leaving the field). Overall, integrative negotiations were never used, and winning took precedence over relationship consideration.

Distributive Versus Integrative Negotiations. When faced with a conflict, individuals can choose to negotiate in either a distributive (i.e., seeking to "win" by maximizing one's own benefits at the expense of the other person) or an integrative (i.e., seeking to solve the problem by reading a mutually acceptable agreement that maximizes mutual bene-

fits) way (D.W. Johnson & F. Johnson, 1997; Walton & McKersie, 1965). Each requires markedly different behaviors and leads to different types of outcomes. In the field of conflict resolution, considerable research has been conducted on how to win in distributive negotiations (Druckman, 1977; D.W. Johnson & F. Johnson, 1997; Rubin & Brown, 1975; Walton & McKersie, 1965). While far less research has been devoted to integrative negotiations, its study goes back to Follett (1940), D.W. Johnson (1966, 1967, 1971), and Pruitt (1981; Pruitt & Lewis, 1977). Despite the focus of the conflict literature on distributive and integrative negotiations, there have been almost no studies on whether students "naturally" engage in distributive or integrative negotiations or whether training has any impact on the way they negotiate.

Dudley, Johnson, and Johnson (in press) examined the impact of the Peacemaker program (D.W. Johnson & R. Johnson, 1995b, 1995c) on sixth- through ninth-grade students' approach to negotiating. Students were placed in a negotiation simulation involving the buying and selling of commodities in which they could negotiate in either a distributive or an integrative manner. From the pretest and the posttest for the control condition, the negotiation procedure used "naturally" by the middle school students could be determined. The researchers found that when given a choice, over 90% of the untrained students chose to negotiate in a distributive way by maximizing their own outcomes at the others' expense. There seems to be a natural bias among middle school students faced with a conflict to go for a "win." This competitive, distributive orientation to resolving conflicts seems, therefore, to be learned early in life. Stevahn, Johnson, Johnson, and Real (1995) found similar results. These results corroborate the earlier findings of studies using college students and adults as participants. In his initial study on perspective reversal, D.W. Johnson (1966, 1967) found that almost all participants used a distributive approach regardless of the potential for an integrative agreement. Pruitt and his associates (Pruitt, 1981; Pruitt & Lewis, 1977) found that over half of their negotiating pairs used the distributive approach.

Cognitive Developmental Theory. There are a number of studies conducted on conflict among students based on cognitive developmental theory, most of which were conducted by Selman and his associates (Adalbjarnardottir & Selman, 1989; Beardslee, Schultz, and Selman, 1987; Leadbeater, Hellner, Allen, & Aber, 1989; Selman, Beardslee, Schultz, Krupa, & Podorefsky, 1986; Selman & Demorest, 1984; Selman & Schultz, 1990; Yeates, Schultz, & Selman, 1991). They classify children's conflict behavior into four levels. Depending on the student's developmental sophistication of social perspective taking, the student may engage in impulsive physical behavior to get what he or she wants or to avoid harm, unilateral actions based on control or appeasement of the other person, reciprocation based on trades and exchanges, and cooperation based on mutual goals. Connected with these levels of conflict resolution are four social information processing skills: defining the problem, generating alternative strategies, selecting and implementing a specific strategy, and evaluating outcomes. The research of Selman and his associates indicates that (a) the type of conflict behavior engaged in is correlated with age (older children use higher level strategies more frequently than do younger children), (b) higher-level strategies are used more frequently with familiar as opposed to unfamiliar participants and with other children as opposed to adults, (c) the use of higher-level strategies is associated with indexes of adaptive functioning and social competence, and (d) the use of higher-level strategies is associated with social status with peers. Vernberg, Ewell, Beery, and Abwender (1994) found that the use of higher-level strategies was predictive of intimacy and companionship in close friendships.

Gender and Conflict Resolution. Overall, most studies on conflict resolution show no gender differences (Nadler & Nadler, 1984). There is some evidence that females are more socially attuned than males and therefore more likely to vary their conflict behavior in response to social cues, such as the other person's attractiveness or the other person's response to their cooperative initiatives (Rubin & Brown, 1975; Swap & Rubin, 1983). Females may be more likely than males to handle isolated negotiations in light of long-term relationships (Greenhalgh & Gilkey, 1984). Males may be more likely than females to use a forceful style (Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980;

Lim & Carnevale, 1990). Males also may tend to obtain better outcomes than females through negotiation (Gerhart & Rynes, 1991; Rifkin, 1984).

What Students Should Learn. When students are involved in long-term, ongoing relationships, the most important conflict strategy for them to use is integrative negotiations in which joint benefit is considered over personal gain. Students who have not received conflict resolution and peer mediation training rarely use such a strategy. They do not seem to know that integrative negotiation is an option and instead tend to use withdrawal or the distributive strategy of striving to "win." The next issue is whether conflict resolution and peer mediation programs are successful in teaching students the procedures for integrative negotiation and whether students do in fact use the procedures to resolve their conflicts.

Students' Strategies for Resolving Conflicts After Training

The central issue in assessing the impact of conflict resolution and peer mediation programs is whether the programs change the strategies students use to resolve their conflicts. As a result of training, students should switch from using such strategies as withdrawal and forcing (distributive negotiations) to strategies such as problem solving (integrative negotiations). In order to use an integrative, problem-solving approach to resolving their conflicts, students should know the steps for engaging in the integrative negotiation and mediation procedures, be able to retain that knowledge over time, be able to apply the procedures to actual conflicts, transfer the procedures to nonclassroom conflicts, and transfer the procedures to nonschool conflicts. When given a choice, furthermore, students should choose integrative over distributive negotiations.

Learning the Negotiation and Mediation Procedures. In several studies of the Teaching Students to Be Peacemakers Program (D.W. Johnson & R. Johnson, 1995b, 1995c), following the training students were asked to write from memory (a) the steps of integrative negotiations (stating what you want; how you feel; the reasons underlying your wants and feelings; your understanding of the other's wants, feelings, and reasons; three potential agreements that would maximize joint gain; and what you agree to) and (b) the procedures for mediation (ending the hostilities, ensuring commitment to the mediation process, facilitating integrative negotiations, and formalizing the agreement). D.W. Johnson, R. Johnson, Dudley, and Magnuson (1995) found that 94% of the second- through sixth-grade students trained knew the six steps of the integrative negotiation procedure, and 92% knew all four steps of mediation. Stevahn, Johnson, Johnson, Green, and Laginski (in press) found that 85% of the ninth-grade students trained knew all six steps of integrative negotiations, and the other 15% knew four of the steps. Other studies demonstrated that immediately after training, 77% of sixth- through ninth-grade students trained knew all six steps of integrative negotiations (D.W. Johnson, R. Johnson, Dudley, et al., in press), 70% of seventh- and eighth-grade Canadian students demonstrated 100% mastery of the integrative negotiation procedure (Stevahn, Johnson, Johnson, & Real, 1995), and 76% of ninth-grade Canadian students demonstrated 100% mastery of the negotiation procedure (Stevahn, Johnson, Johnson, Laginski, & O'Coin, 1995). The Metis Associates (1990) conducted an evaluation of the Resolving Conflict Creatively Program implemented in the 1988-1989 school year at selected schools in New York City and found that trained students showed a greater mastery of conflict resolution-related knowledge than did untrained students. Roush and Hall (1993) found that in pretesting and posttesting of 38 fourth graders, 55 fifth graders, and 52 sixth graders in a study of conflict resolution training, there was a significant increase in students' knowledge of how to resolve conflicts in constructive ways. Bastianello (1989) conducted a year-long study observing 20 second- and third-grade students who were being taught a conflict resolution procedure. He found that their conflict resolution skills increased. From these studies it may be concluded that the conflict resolution and peer mediation training has been successful in teaching students the knowledge relevant to the program such as the integrative negotiation and peer mediation procedures.

Retention of Knowledge of the Negotiation and Mediation Procedures. In addition to learning the integrative negotiation procedure, a number of studies provide evidence that knowledge of the negotia-

tion and mediation procedures was retained months after the Teaching Students to Be Peacemakers training was conducted. D.W. Johnson, R. Johnson, and Dudley (1992), nearly 6 months after the training ended, selected a random sample of students who did and did not receive the training and administered a measure to see if students would remember and use appropriately the integrative negotiation procedure. Trained students knew and were much more likely to use the integrative negotiation procedure than were the untrained students. In the D.W. Johnson, R. Johnson, Dudley, and Magnuson (1995) study, a retention test on the negotiation and mediation procedures was given up to 8 months after students were trained, and 92% were able to write out from memory all the integrative negotiation and mediation steps. In the Stevahn, Johnson, Johnson, Green, and Laginsky (in press) study, the experimental group was given training integrated into an English literature unit while the control group received the training during two class sessions following the study. Seven months after the training ended, 75% of the students in the experimental condition remembered three or more of the integrative negotiation steps while only 30% of students in the control condition did so. Stevahn, Johnson, Johnson, Laginski, and O'Coin (1995) found that 13 weeks after the end of training, 62% of the trained students still used the whole negotiation procedure, and another 19% used five of the six steps. Stevahn, Johnson, Johnson, and Real (1995) found that 8 weeks after the end of training, 60% of the students in the cooperation/trained condition still used the whole procedure. From these studies it may be concluded that students who participated in the Teaching Students to Be Peacemakers Program tended to retain their knowledge of the negotiation and mediation procedures.

Application of Negotiation and Mediation Procedures to Conflict. In the studies of the Teaching Students to Be Peacemakers Program, the application of the integrative negotiation procedure to descriptions of actual conflicts was examined. Three measures were used to determine whether students could actually use the negotiation procedure in resolving conflicts. The measures were written responses to conflict scenarios (D.W. Johnson, R. Johnson, & Dudley, 1992; D.W. Johnson et al., 1994; D.W. Johnson, R. Johnson, Dudley, & Magnuson, 1995; D.W. Johnson, R. Johnson, Dudley, et al., in press; Stevahn, Johnson, Johnson, Green, & Laginski, in press; Stevahn, Johnson, Johnson, Laginski, & O'Coin, 1995; Stevahn, Johnson, Johnson, & Real, 1995), oral responses to conflict scenarios given in an interview (D.W. Johnson, R. Johnson, Dudley, & Magnuson, 1995), and role playing responses to conflict scenarios that were videotaped and then analyzed (D.W. Johnson, R. Johnson, & Dudley, 1992; D.W. Johnson et al., 1994). The results for all three measures were consistent. Whereas before training practically none of the students used the integrative negotiating procedure to resolve conflicts, after training the majority of the participating elementary, middle school, and high school students used the integrative negotiation procedure to resolve conflicts, even when they were asked to role play conflicts 5 months after the training had ended. In addition, actual observation of students managing conflicts on the playground, in the hallways, and in the lunchroom found that 4 months after training, 65% of the students still used the integrative negotiation strategy to resolve their conflicts (D.W. Johnson et al., 1994).

Transfer of Training: Spontaneous Use of Negotiation and Mediation Procedures in Nonclassroom and Nonschool Settings. An important issue in conflict resolution and peer mediation training is whether students will transfer the procedures and skills they learn to nonclassroom and nonschool settings. In the D.W. Johnson, R. Johnson, and Dudley (1992) study, students reported spontaneously using the negotiation and mediation procedures at home with their siblings and with their friends, and parents reported that students used the procedures at home. D.W. Johnson et al. (1994), 4 months after the training had ended, observed the trained students systematically for 10 entire school days. During the observations, two types of conflicts emerged: (a) low-investment conflicts and (b) high-investment conflicts. Low-investment conflicts were usually lighthearted and tended to last 30 seconds to 1 minute. Students involved in low-investment conflicts did not negotiate or seek mediation, even if they were trained in the procedure. High-investment conflicts created so much emotion that students were unable to work academically or interact with classmates in a positive manner. High-in-

vestment conflicts were found to occur in school but were often about things that occurred at home, on the bus, or in other areas. They would last for days or longer. For these high-investment conflicts, eight students were observed mediating the resolution of 14 conflicts. They went through all the steps of negotiating. The average duration of mediation was 12 minutes, 42 seconds.

In the D.W. Johnson, R. Johnson, Dudley, Ward, and Magnuson (1995) study, students reported on 209 conflicts that occurred in school and 574 conflicts that occurred in their homes. Before training, negotiation was used only once in the experimental group and never in the control group; during and after training nearly 40% of the conflicts in the experimental group were resolved through integrative negotiations. Although the training took place in school and focused on school conflicts, there were no significant differences between the strategies used in school and those used at home. Students used the strategies learned in school just as frequently at home as they did in school. There were also no significant differences between males and females in the strategies used to manage conflicts. Gentry and Benenson (1993) analyzed the at-home conflict behaviors of 27 fourth-, fifth-, and sixth-grade elementary student mediators before and after their 10-week training. The students and their parents reported a decrease in the frequency of sibling conflicts, and parents reported that (a) students had an improved ability to talk productively during conflicts with siblings and (b) there was a decrease in the number of times the parents had to intervene during conflicts between students and their siblings.

There is evidence, therefore, that conflict resolution and peer mediation training results in students knowing the negotiation and mediation procedures, being able to use the procedures in actual conflicts, transferring the procedures to nonclassroom conflicts, and transferring the procedures to nonschool conflicts in the home. Since this evidence comes from some of the most methodologically sound studies in the field, some confidence can be had in it.

Conflict Strategies Theory. Conflict strategies theory focuses on two dimensions of conflict—achieving one's goals and maintaining a good relationship with the other disputant (D.W. Johnson, 1991; D.W. Johnson & F. Johnson, 1997). Five strategies are focused on: forcing, withdrawing, smoothing, compromising, and problem solving. In two studies students were given the Student Attitudes About Conflict Scale before and after the implementation of peer mediation programs. In one study there was a significant decrease in the use of withdrawal/avoidance (McCormick, 1988) and in the other study there were no significant changes in conflict strategies used (Crary, 1992). Many of the students, however, had not had contact with the peer mediators or the program and, therefore, could not be expected to change.

In a series of studies on the Teaching Students to Be Peacemakers Program, students were asked to describe in detail how they managed their conflicts, and the responses were coded to reflect the five strategies. D.W. Johnson, R. Johnson, Dudley, Ward, and Magnuson (1995) found that after training, 45% of the students used integrative negotiations to resolve their conflicts. One result of the training was that most participants became more relationship oriented, using a strategy aimed at preserving the relationship as well as achieving their goals. Smoothing, which requires students to give up their own goals for the goals of others, was almost never used in the conflicts reported. Stevahn, Johnson, Johnson, Green, and Laginski (in press) found that after training only 10% of students used verbal forcing to resolve their conflicts, and about 80% used integrative negotiations. Stevahn, Johnson, Johnson, and Real (1995) found that immediately after training almost all students in the cooperative condition used the integrative negotiation and compromising procedures; the same results held on a retention test 14 weeks later. Stevahn, Johnson, Johnson, Laginski, and O'Coin (1995) found that almost 50% of the trained students used integrative negotiations and compromising to resolve conflicts. D.W. Johnson, R. Johnson, Dudley et al. (in press) found that the majority of trained sixth- through ninth-grade students used integrative negotiations to resolve their conflicts. One of the effects of the conflict resolution and peer mediation training, therefore, was to change students' conflict resolution behavior so that they protected the future of the relationship as well as worked to achieve their immediate goals.

Distributive Versus Integrative Negotiations. The intent of conflict resolution and peer mediation programs in schools is to teach students how to manage conflicts constructively. In ongoing, long-term relationships, integrative negotiation procedures tend to be most constructive for managing conflicts (Deutsch, 1973; D.W. Johnson & R. Johnson, 1995b). Dudley, Johnson, and Johnson (in press) found that when students were given a choice between negotiating in a distributive way and negotiating in an integrative way, conflict resolution and peer mediation training seemed to change the students' behavior. After the conflict resolution and peer mediation training, 83% of the middle school students used an integrative problem-solving approach to negotiations, while 86% of the students in the control condition still negotiated in a distributive manner. This effect was consistent in the sixth, seventh, eighth, and ninth grades and for males and females. Stevahn, Johnson, Johnson, and Real (1995) found similar results in a study of 111 Canadian seventh and eighth graders. These studies provide a direct and important link to the literature on conflict resolution and peer mediation programs in schools and the literature on negotiation in the field of conflict resolution. The combination of integrative negotiation and perspective-reversal procedures emphasized in the Teaching Students to Be Peacemakers Program may be especially powerful in helping students focus on maximizing joint outcomes and thereby resolve conflicts constructively.

Strategies Used by Faculty and Staff. Correlational findings indicate that parent-child interactions marked by parental responsiveness to adolescents' expression of discrepant opinions are associated with advanced adolescent ego-identity and social perception skills (Grotevant & Cooper, 1985, 1986). Social support from related and unrelated adults in early adolescence, furthermore, resulted in a significant reduction in problems (e.g., drugs, emotional distress, relationships, work, health, and others) that adolescents will face as young adults (Newcomb & Bentler, 1988). Teachers, therefore, are well advised to encourage students to express their opinions and positions, especially when they are discrepant from those of the teacher. The discrepant positions and opinions can then be resolved through integrative negotiations.

Summary. The current evidence indicates that conflict resolution and peer mediation training does result in students knowing the negotiation and mediation procedures, being able to use the procedures in actual conflicts, transferring the procedures to nonclassroom conflicts, transferring the procedures to nonschool conflicts in the home, and using integrative negotiation procedures to resolve conflicts even when there is an opportunity to go for the "win" (i.e., negotiate in a distributive way). These studies are generally methodologically sound, in four ways. First, the nature of the training program and the dependent variables are clear. Second, students were either randomly assigned to conditions, or a control group was randomly selected from the student body as a whole. Third, the program was carefully implemented. And fourth, valid and reliable dependent measures were used. Some confidence, therefore, may be given to results of these studies.

While these results are encouraging, there are problems with the current state of knowledge. First, too much of the current research comes from investigations of the Teaching Students to Be Peacemakers Program. Much of the research on other conflict resolution and peer mediation programs in schools has ignored whether students actually learn the procedures being taught, retain that knowledge over time, use the procedures in actual conflicts, and transfer the procedures to nonclassroom and nonschool situations. In many programs it is assumed that these dependent variables are influenced in the expected direction, and outcomes such as suspensions are investigated without documenting whether in fact students actually learn anything from the training they received.

Second, little is known about the manner in which conflicts unfold and the patterns of interaction among students as they resolve their conflicts. With the exceptions of the observational study by Krappmann and Oswald (1987), the videotaped role playing sessions in the D.W. Johnson, R. Johnson, and Dudley (1992) and the D.W. Johnson et al. (1994) studies, and the observations done in the D.W. Johnson et al. (1994) study, direct assessment of the ways students manage their conflicts with and without the help of a peer mediator is practically nonexistent. One of the next steps is for researchers

to examine in more detail the patterns of interaction among students during a conflict.

Third, there is a marked lack of investigation of affective expressions (which can vary from joy to rage) in conflicts. Though DeCecco and Richards (1974) noted the importance of expressing anger in resolving conflicts, and D.W. Johnson (1971) conducted a set of experimental studies on the impact of anger, warmth, and coldness on the outcomes of negotiations, there has been very little research in schools on the affect expressed in conflicts and its impact on the strategies students use and the resulting outcomes.

The next issue is to examine the outcomes resulting from the ways students manage their conflicts.

Outcomes of Conflict Resolution Training

In examining the outcomes of conflicts among students, researchers have examined a wide variety of outcomes including (see Table 2) (a) how students view the outcomes of their conflicts; (b) the types of resolutions reached before and after training; (c) resolutions resulting from peer mediation; (d) academic achievement; (e) attitudes toward conflict; (f) school climate; (g) psychological health; (h) discipline problems, fights, absenteeism, referrals, and suspensions; and (i) impact on teachers, administrators, and parents.

Students' Views on Destructive and Constructive Conflict Outcomes

There is some evidence that students see conflicts as being constructive as well as destructive. The potential destructive outcomes for students include physical risks, social isolation, humiliation, loss of status, lowered academic performance, lowered attendance, and personal feelings of confusion, anger, helplessness, and depression. Opotow (1991), in her interviews of inner-city seventh graders, found that the adolescents dismissed physical risks as a secondary consideration and instead feared social isolation, humiliation, and loss of status. She found that two thirds of conflicts occurred with a close friend or a classmate, and since the students were compelled by the school schedule to see their adversaries in class, gym, or lunch, they feared that hostilities would escalate and peers would choose sides. As stress increased, attendance and academic work often suffered, and feelings such as confusion, anger, helplessness, and depression increased. Often students did not understand why a fight had occurred and mourned the loss of a friend without any coherent explanation of what had gone wrong. Berndt and Keefe (1992) also found that increases in conflict between friends longitudinally predicted detachment from school and lower grades.

Students also see constructive outcomes resulting from their conflicts of interests. Opotow (1991) found that the seventh graders she interviewed perceived physical fights as more constructive than

TABLE 2: Outcomes Resulting from Students' Conflicts

Untrained students	Trained students
No agreement	Agreement
Winner & loser (inequitable outcomes)	Maximize joint (equitable) gain
Decreased achievement	Increased achievement
Negative attitudes toward conflict	Positive attitudes toward conflict
Negative school climate	Positive school climate
Psychological maladjustment	Psychological health
Discipline problems/suspensions	Students resolve own conflicts
Negative affect	Positive affect
Discontinued interaction	Continued, ongoing interaction

destructive, as they resulted in maintaining valued social norms, deterring harmful behavior, providing protection from victimization, providing gains in status, increasing self-awareness, clarifying personal identity, clarifying others' identities, clarifying dominance hierarchies, initiating friendships, and they were enjoyable. In conflicts, students find opportunities for (a) modifying the status quo and the behavior of troublesome peers, (b) self-protection, social advancement, personal worth, interpersonal insight, conflict resolution, and excitement, (c) heroic drama that generated an oral history of danger, heroism, and good versus evil, and (d) moral discourse and clarification of values and codes of behavior. Opotow concluded that these inner-city seventh graders were clearly fascinated by and drawn to conflicts—they liked to start them, watch them, hear about them, and discuss them.

Disputants' Resolutions

Little is known about the resolutions students agree to on their own without the help of a mediator. The types of resolutions students reach may be divided into resolutions by untrained students, resolutions by trained students, and distributive versus integrative agreements.

Resolutions Before Training. With untrained students, DeCecco and Richards (1974) found that over 90% of the conflicts reported by the over 8,000 students they studied were perceived to be unresolved or resolved in destructive ways. Krappmann and Oswald (1987) found that 10- and 12-year-old German children agreed on solutions to their conflicts only about half of the time, and in those agreements one child forced the other to give in. D.W. Johnson, R. Johnson, Dudley, Ward, and Magnuson (1995) asked students to report the nature of the resolution of the conflict. Untrained students left over one third of their conflicts unresolved, asked adults to arbitrate the conflicts about 20% of the time, reported that one of the disputants won over 25% of the time, and reported that less than 1% of the conflicts were resolved through integrative negotiations. There was no significant difference between the solutions arrived at for conflicts in school and those arrived at for conflicts at home.

Resolutions After Training. D.W. Johnson, R. Johnson, Dudley, Ward, and Magnuson (1995) found that after conflict resolution and peer mediation training, over 25% of the conflicts were resolved through integrative agreements, and over 20% were resolved by creating new agreements. There was no significant difference between the solutions arrived at for conflicts in school and those arrived at for conflicts at home. McCormick (1988) found that the number of students who said they resolved their conflicts by "talking it out" doubled after the introduction of the program. Roderick (1989) studied a peer mediation program in an elementary school in Brooklyn and found that 87% of the teacher respondents noted changes in their students' spontaneous use of conflict resolution skills.

Distributive Versus Integrative Negotiations. Two studies placed students in a negotiation situation in which they could negotiate in either a distributive or an integrative way (Dudley, Johnson, & Johnson, in press; Stevahn, Johnson, Johnson, & Real, 1995). Previous research indicated that college students and adults tend to (a) perceive all negotiation situations as requiring the distributive approach and (b) compete to see who can win (D.W. Johnson, 1967, 1971; D.W. Johnson & R. Johnson, 1989; Pruitt & Lewis, 1977). It is unclear, however, at what age the competitive bias and the predominant use of the distributive negotiation procedure begin. The results of these two studies indicated that prior to training, over 90% of 11- to 15-year-old students chose to negotiate in a distributive way. After training, the students who had been trained in conflict resolution procedures reached far more integrative agreements than did untrained students, characterized by higher joint profit and a higher mean individual profit of the least successful negotiator.

Resolutions Resulting From Peer Mediation

When students become heavily invested in waging conflict, they tend to rigidify their positions and refuse to budge, misconstruing moves to resolve the conflict as signs of weakness. The disputants may be so angry or upset that they lack the imagination, creativity, and/or experience necessary to work their way out of the pit they have jointly dug. For a variety of reasons, disputants are sometimes either unable

or unwilling to move toward agreement of their own accord, and a mediator is needed and sought out.

Most of the studies on peer mediation simply report whether or not an agreement was reached. Burrell and Vogl (1990) found that 80% of the 75 cases referred to mediation at a high school in Milwaukee were successfully mediated. McCormick (1988) found that all 13 mediation sessions ended in agreement; 1 month later 10 of the 18 disputants were happy with the agreements, and 3 months later 13 disputants were happy with the agreements (5 were undecided). A middle school in Ohio reported a 96% agreement rate for 155 conflicts mediated (Ohio Commission on Dispute Resolution and Conflict Management, 1993). At the elementary, middle, and high schools studied in Honolulu, 127 conflicts among students were mediated with a 92% success rate, and 100% of 12 student-teacher conflicts were successfully mediated (Araki, 1990). Schumpf, Crawford, and Usadel (1991) reported that of 245 conflicts referred to peer mediators in a Midwestern middle school, 98% were successfully resolved. McCormick (1988), in an assessment of the Wakefield Peer-Mediation Program, found that 85% of the mediations conducted resulted in long-term agreements. Bradley (1989) noted that in a peer mediation program in the Warwick Valley school district, about 70 mediations had taken place, 66 of which had reached successful conclusions; 90% of the disputants indicated that they had honored their agreements. The Metis Associates (1990), in their evaluation of the Resolving Conflict Creatively Program in New York City, found that in the 535 successful student mediations that took place in the five participating schools, 85% of the surveyed students who used a mediator reported it to be helpful.

Crary (1992) evaluated a peer mediation program in a Santa Monica middle school in which 96 conflicts involving 203 disputants were referred for mediation. Of the 95 conflicts mediated, 92 (97%) were reportedly resolved. Of the disputants, 95% were satisfied with the mediation process, and 96% stated that their disputes were still resolved at the end of the semester. Lam (1989) noted that 90% of the 1,328 conflicts that were mediated in inner-city high schools in New York City were mediated successfully, and over 90% of those agreements remained intact. In an Oakland inner-city school, 9 of 10 conflicts were mediated successfully (Goodman, 1987). Lam noted that not all mediation programs had such a high success rate. She noted that one central New York school had only 74% of their 81 mediations end in agreements, and two high schools and one junior high school in Waukesha, Wisconsin, had only 58% of their 250 mediations end in successful agreements. Umbreit (1991), in a study of the effectiveness of mediation in a New York City school, found that 67% of the 134 disputes referred to mediation resulted in agreements.

A few studies report more details about the nature of the agreements reached in mediation. D.W. Johnson, R. Johnson, Mitchell, et al. (in press) found that in a prekindergarten through fourth-grade inner-city school, peer mediation resulted in agreement 98% of the time. Disputants tended to agree to avoid each other in the future 84% of the time ("Stay away from each other, don't talk to each other, don't sit by each other") and accepted an adult-imposed solution 8% of the time. D.W. Johnson, R. Johnson, Cotten, et al. (1995), in a study of the same school 1 year later, found the success rate of peer mediation to be 95%. The most common solution was a mutual agreement to avoid each other (77% of the agreements were "stay away from each other, don't play with each other, don't talk to each other"). Given the violent nature of most of the conflicts in these two studies, the success rate is remarkable. These young children, however, did not attempt to problem solve the issues or search for integrative agreements that would maximize joint outcomes and meet the needs of both parties, perhaps because the disputants did not know how to do so. These types of agreements, furthermore, may tend to be unstable, as students may be required to see each other in class and in the hallways. Similar agreements, however, were reported by Jones and Carlin (1994) in Philadelphia elementary and secondary schools. They found the agreements resulting from mediation to be simple, usually consisting of promises to "be friendly, keep the peace, or stop disruptive behavior" or agreements to "avoid each other."

The results are congruent with the conclusion that students are able to mediate successfully their schoolmates' conflicts, regardless of age level or socioeconomic status. The high success rate of peer mediation may be due to several reasons. It may be

that peer mediation is highly effective and that the mediators were quite skillful and competent. The effectiveness of peer mediation may, on the other hand, be due to the voluntary nature of mediation (all disputants have to agree to mediation) or because only easily resolvable conflicts were brought to mediation.

Discussions of peer mediation programs may tend to oversimplify what peer mediators actually do. While merely introducing a third person into a conflict may be highly beneficial, it can also be highly problematic. Emerson (1990), for example, in his study of peer mediation programs in elementary schools in Oregon, found that most of the teachers/trainers did not (a) understand mediation, (b) understand how to train peer mediators, and (c) have adequate group process skills. Consequently, many student mediators were improperly trained, frequently viewed as policemen, and frequently disliked by other students. At the adult level, mediation is a highly complex process. There is evidence, for example, that mediators do not help when (a) there is a high level of hostility between the disputants (Bercovitch, 1989; Hiltrop, 1989; Pruitt, McGillicuddy, Welton, & Fry, 1989), (b) the mediator is distrusted (Hiltrop, 1989), (c) there is a lack of resources (Carnevale & Pegnetter, 1985; Kochan & Jick, 1978; Pearson & Thoennes, 1982), (d) disputants are uncommitted to mediation (Carnevale, Lim, & McLaughlin, 1989; Hiltrop, 1989), (e) the issues involve general principles (Bercovitch, 1989; Pruitt et al., 1989), (f) disputants have unequal power (Bercovitch, 1989), and (g) there is significant psychopathology in the disputants' relationship and psychotherapy rather than mediation is required (Kressel & Pruitt, 1989; Pruitt & Carnevale, 1993). Whether mediation is a constructive or destructive influence depends on the skills of the mediator. In most programs students receive very minimal training in how to be a peer mediator. The assumption that a few hours of training will result in highly successful mediators may vastly oversimplify the process of mediation. Conflict resolution and peer mediation training may need to be recast as a spiral curriculum in which students are given 12 years of training, with the training becoming more complex and sophisticated each year (D.W. Johnson & R. Johnson, 1995c, 1995d).

The self-report nature of the data on the effectiveness of peer mediation makes it somewhat suspect. Further research is needed that examines what actually happens within mediation sessions, contrasts different approaches to mediation so that mediating variables can be identified, and uses behavioral measures of mediation outcomes.

Academic Achievement

Linking conflict resolution training with academic learning is important, as the history of innovations in schools indicates that new programs are not widely adopted and maintained over a number of years unless they increase students' academic achievement (Fullan, 1991; D.W. Johnson, 1970, 1979). There is some evidence that the destructive management of conflict may lower achievement. Increases in conflict between friends longitudinally predict detachment from school and lower grades (Berndt & Keefe, 1992). Opotow (1991), in her interviews of inner-city seventh graders, concluded that as the stress created by conflicts with peers increases, attendance and academic work often suffer.

There is also evidence that the integration of subject area learning and the learning of the conflict resolution and peer mediation procedures can increase students' academic achievement. In the Stevahn, Johnson, Johnson, Green, and Laginski (in press) study, the conflict training was integrated in a 2-week high school English unit. Students in the experimental group studied a novel, learned the negotiation procedure, and role played each of the major conflicts in the novel using the integrative negotiation procedure. Students in the control group spent all their time studying the novel. Students in both conditions took an achievement test the last day of the instructional unit. Students in the experimental condition scored significantly higher on the achievement test than students in the control condition. Students in the conflict resolution training condition not only learned the factual information contained in the novel better but were better able to interpret the information in insightful ways. The higher achievement is all the more notable because students in the control group spent all their time studying the novel, while students in the experimental condition had to learn both the novel and the negotiation procedure

in the same amount of time. The integration of conflict resolution training into academic units provides an arena in which frequent and continued practice of the conflict resolution procedures can take place. Conflict resolution procedures need to be so overlearned that they become automatic habit patterns that guide behavior in serious and intense conflicts. Stevahn, Johnson, Johnson, Laginski, and O'Coin (1995) replicated the study in a ninth-grade English class in Canada with almost identical results. In addition, they administered a second achievement test 13 weeks after the unit had ended and found that students in the conflict training condition scored significantly higher.

Stevahn, Johnson, Johnson, and Real (1995) extended the other two studies in a study using seventh- and eighth-grade classes in a rural K-8 public school in Ontario, Canada. The students were randomly assigned to four conditions: conflict training in a cooperative context, conflict training in an individualistic context, no conflict training in a cooperative context, and no conflict training in an individualistic context. Besides an achievement test given immediately after the unit ended, a retention test was given 8 weeks later. The highest achievement on both the posttest and the retention test was found in the cooperative learning/conflict training condition, indicating that the combination of the two is more powerful than either alone.

From these three studies it may be concluded that conflict resolution and peer mediation training can increase achievement when it is integrated into academic units, especially when it is conducted in combination with the use of cooperative learning. Because these studies were so carefully conducted (with random assignment of students to conditions, the rotation of teachers across conditions, clear definition of the training program, clear definition of the dependent variable, and so forth) some confidence can be placed in their results. In addition to these studies, there are additional testimonials of how conflict resolution and peer mediation training increased students' academic achievement. Roderick (1989) found that teachers interviewed reported that students participating in the program achieved higher academically than did nonparticipants.

Attitudes Toward Conflict and the Conflict Resolution Program

If students are to manage their conflicts constructively, they must learn to value conflicts and see them as potentially positive. There is clear evidence that untrained students have negative attitudes toward conflict that become less negative and more positive as a result of conflict resolution and peer mediation training. Dudley, Johnson, and Johnson (in press) asked students to write down all the words that came to mind then they thought of the word *conflict*. Before training, on the average, the sixth- through ninth-grade students listed seven negative words and only one positive word. After the conflict resolution and peer mediation training, on the average, students listed five negative and three positive words. Stevahn, Johnson, Johnson, Laginski, and O'Coin (1995) found that prior to training, 42 ninth-grade Canadian students associated six negative words and one positive word with conflict; after training, on the average, they listed six negative and two and one half positive associations with conflict. Stevahn, Johnson, Johnson, and Real (1995) found that before training, on the average Canadian seventh and eighth graders listed eight negative words and one positive word, whereas after training the students listed six negative and five positive words. The combination of cooperative learning and conflict resolution training produced the most positive and least negative attitudes. Crary (1992) found that students' and teachers' attitudes toward conflict became more positive as a result of a peer mediation program. Deutsch (1992) found that conflict resolution training and cooperative learning resulted in a substantially more favorable school climate and positive attitudes toward the conflict resolution training by students, teachers, and administrators. Brown (1992) found that the elementary students who received peer mediation training had more positive attitudes toward conflict than did their untrained counterparts, but there were no significant differences on attitudes toward the peer mediation program between trained and untrained students in middle and high schools. Elementary school teachers in the treatment condition had more positive attitudes toward the peer mediation program than did the teachers in the control condition, and there were weak differences between the middle and high

school teachers in the two conditions. When peer mediators were poorly trained, they were likely to be viewed as policemen and disliked by many of their peers (Emerson, 1990). Jones and Carlin (1994) found that disputants who went through mediation stated they would use it again and would recommend it to their friends. McCormick (1988) found that all the students who directly participated in the program as either peer mediators or disputants were positively affected. Roderick (1989) found that 86% of responding teachers reported they had more positive attitudes about conflict as a result of having their students participate in a peer mediation program. The Ohio Commission on Dispute Resolution and Conflict Management (1996) compared two K-8 suburban schools, one with and one without a conflict resolution program, and found that in the treatment school students were more willing to stop a fight, were less likely to think people deserved to be beaten up, were more willing to try to stop friends from fighting, and had more confidence in their ability to help themselves and others solve problems.

Overall, there is some reason to believe that well conducted conflict resolution and peer mediation training will result in more positive attitudes toward conflict and toward the training itself.

School Climate

Several studies administered questionnaires to students and found no significant differences in school climate from pre- to post-implementation (Crary, 1992; McCormick, 1988; Stern & Van Slyck, 1986). In two schools, peer mediators' perceptions of school climate changed dramatically for the better, as did the teachers' perceptions of the school climate (Crary, 1992, Stern & Van Slyck, 1986). In a survey of administrators in charge of discipline in California high schools, Sherrod (1995) found that the majority of respondents believed the peer conflict management programs improved the school climate. Roush and Hall (1993) found that responses by teachers to a questionnaire on peer mediation effectiveness indicated that when the mediators were on the playground, there was a noticeable decrease in arguing among students and an improved playground climate. Teachers and principals participating in the Teaching Students to Be Peacemakers Program and the parents of participating students reported that conflicts among students became less severe and destructive and that the classroom climate therefore became more positive (D.W. Johnson, R. Johnson, & Dudley, 1992; D.W. Johnson et al., 1994; D.W. Johnson, R. Johnson, Dudley, & Magnuson, 1995).

Psychological Health, Self-Esteem, Self-Regulation, and Resilience

The ability to manage conflicts constructively is an essential aspect of psychosocial health and adjustment (Hinde, 1979; D.W. Johnson, 1975). With the ability to manage conflicts, children can easily become socially isolated, which is associated with behavioral maladjustment (D.W. Johnson & Norem-Hebeisen, 1977). Deutsch (1992; Zhang, 1994) reported an investigation on the effects of conflict resolution and cooperative learning training in three New York City alternative high schools that specialized in students at risk. A student survey was given at different times during the training, systematic observations were conducted, and interviews were conducted. Students improved in ability to manage their conflicts, and they experienced increased social support and less victimization from others. This improvement in their relations with others led to increased self-esteem as well as a decrease in feelings of anxiety and depression and more frequent positive feelings of well-being. The higher self-esteem, in turn, produced a greater sense of personal control over their own fates. The increases in their sense of personal control and in their positive feelings of well-being led to higher academic performance. There is also indirect evidence that the training improved students' work readiness and work performance. In the evaluation of the Resolving Conflict Creatively Program conducted by the Metis Associates (1990), 84% of surveyed student mediators agreed that being a mediator helped them understand people with different views and learn valuable life skills.

Engaging in conflicts can decrease untrained students' self-esteem. Krappmann and Oswald (1987), in their study of 10- and 12-year-old German children, found that in 45% of conflicts the feelings or self-images of one or both students were physically or psychologically hurt, even if they eventually worked out solutions to the conflicts. Opotow (1991)

found that as conflicts lingered, they generated self-doubt and undermined self-esteem and self-confidence of seventh graders.

On the other hand, several studies have documented that conflict resolution and peer mediation training result in increased self-esteem. Teachers see students as having improved self-esteem as a result of a conflict resolution and peer mediation program (Gentry & Benenson, 1993; Greenawald & Johnson, 1987; Metis Associates, 1990; K. Miller, 1993). Other studies have found no significant gain in self-esteem (McCormick, 1988), others found gains only for male mediators (Stern & Van Slyck, 1986), and still others found a trend toward improved self-esteem but no statistically significant differences (Crary, 1992). Roush and Hall (1993) found that eight middle school students who took an elective course in conflict resolution skills showed a significant increase in self-concept. Burrel and Vogl (1990) reported that students felt high self-approval for being mediators because of the satisfaction they received from helping their peers resolve problems, and teachers reported that the self-esteem of mediators increased. Cooper and Cooper (1992) found that the adolescents who were most successful in resolving conflicts constructively with peers reported the most positive self-esteem. Roderick (1989) found 87% of responding teachers reported that students' self-esteem increased, and 86% of the teachers reported increases in their own self-esteem.

Maxwell (1989) pointed out that peer mediation programs are really about engaging students in self-regulation. Self-regulation is fostered in students when they are given the opportunity to participate in decisions relating to their own lives. Involvement in decision making develops responsibility, self-discipline, and self-directed behavior—that is, self-regulation. Finally, children who were identified as resilient (capable of recovering from a stressful event) were characterized by the ability to resolve conflicts in a problem-solving way (Garmazy, 1991).

While destructively managed conflicts decrease students' self-esteem and promote social isolation and maladjustment, the ability to resolve conflicts constructively tends to increase psychological health, self-esteem, self-regulation, and resilience. In many ways, being skillful in integrative negotiations and mediation is a developmental advantage that enables students to build and maintain healthy relationships with others.

Discipline Problems, Fights, and Suspensions

Given that students learn the integrative negotiation and peer mediation procedures, retain that knowledge over time, are able to apply the procedures to conflicts, and spontaneously transfer the procedures to nonclassroom and nonschool conflicts, conflict resolution and peer mediation training should result in reduced discipline problems and suspensions. Students' success in resolving their conflicts constructively should result in reduced numbers of student-student conflicts referred to teachers and administrators, which, in turn, should reduce suspensions. There are numerous studies in which teachers, administrators, and students were interviewed about their perceptions of the outcomes of the conflict resolution and peer mediation training.

In an elementary school, D.W. Johnson, R. Johnson, and Dudley (1992) reported an 80% decrease in the frequency of student-student conflicts that teachers had to manage and a reduction in principal referrals to zero in the classes participating in the conflict resolution and peer mediation program. Meek (1992) evaluated a conflict resolution program in New York City by conducting a survey of 130 teachers and found that 71% reported a reduction of physical violence in the classroom, 66% heard less name calling and fewer verbal put-downs, and 69% saw increased student willingness to cooperate with each other. Meek reported a 50% decline in student assaults. Roush and Hall (1993), in a study of 38 fourth graders, 55 fifth graders, and 52 sixth graders who participated in a conflict resolution program, found that the number of misconduct slips handed out on the playground decreased significantly. Responses by teachers to a questionnaire on peer mediation effectiveness indicated that when the mediators were on the playground, there was a noticeable decrease in arguing among students and an improved playground climate.

In secondary schools, Millhauser (1989) reported that a peer mediation program reduced the drop-out rate. McDonald and Moriarty (1990) reported a reduction in the suspension rate. Cheatham (1989) reported a 46% to 70% reduction in suspensions for fighting. Sadalla et al. (1990) reported a 75% drop in the number of incidents referred to the principal. Schumpf et al. (1991) reported that more than 200 disputes per year were resolved with a 96% to 100% success rate. In Greenawald and Johnson's (1987) study, teachers and administrators reported that a peer mediation program had a great deal of impact in reducing violence. Finally, Meek (1992) reported a 50% decline in student assaults.

Conbere (1994) reported that in the first year of the implementation of a peer mediation program in a high school in Minneapolis, the number of suspensions dropped from 459 to 205, and the number of violent incidents dropped from 107 to 51. McCormick (1988) reported that in 1 year of a peer mediation program there was a 51% decrease in self-reported use of aggression by students and a 47% decrease in officially reported use of aggression. Stern and Van Slyck (1986) reported that 74% of disputants reported that they would have had a fight if they had not been referred to mediation. Araki (1990) found no changes in rates of retention, suspension, dismissal, offenses, and absenteeism at three Honolulu schools.

In a study of the effectiveness of a peer mediation program by Tolson, McDonald, and Moriarty (1992), 14 students were selected according to their grade point averages and their recognized leadership skills and trained as mediators. Students involved in conflicts were randomly assigned to either a traditional discipline program (24 in all) or to a pair of trained peer mediators (28 in all). Mediation significantly reduced referrals for interpersonal problems, but did not affect the number of overall disciplinary referrals. Peer mediators were perceived to be fair, useful, and skilled in 75% of the cases.

Sherrod (1995) conducted a statewide survey of high schools in California and obtained a 74% response from the "administrator in charge of student discipline." Over 70% of the respondents indicated that student peer conflict management programs reduced the incidence of student suspensions, and more than one third perceived the programs as reducing the frequency of student expulsions. A majority of the respondents also perceived the peer conflict management programs as reducing school violence, classroom disruptions, and repeat referrals and suspensions. Davis (1986) reported on the School Mediators Alternative Resolution Team in a high school in Long Island City in Queens, New York. During a 2-year period, 260 disputes involving over 620 students were resolved through mediation. Follow-up interviews showed that 90% of the mediated agreements were upheld. Suspensions for fighting dropped from 63 (in the 1982-1983 school year) to 34 (in the 1983-1984) to 18 (in 1984-1985). Tolson, McDonald, and Moriarty (1992), in a study of a suburban high school that serviced 1,070 students in grades 9 through 12, found that the number of referrals for interpersonal problems was reduced by a peer mediation program and that males receiving mediation did better than females.

McCormick (1988) used a pre-post research design to assess the effect of the Wakefield Peer-Mediation Program and found that the number of in-school fights was diminished by approximately one half (official referrals for fighting decreased 57%, and students' responses to a questionnaire indicated a 51% decrease). Roderick (1989) studied a peer mediation program in an elementary school in Brooklyn and found that 87% of the teacher respondents noted less physical violence in their classrooms, decreased use of verbal put-downs, and students' spontaneous use of conflict resolution skills. Eighty-six percent of responding teachers also reported changes in their own use of listening skills and conflict resolution procedures in both their classrooms and personal lives. Bradley (1989) reported that the peer mediation program in the Warwick Valley school district resulted in a decrease in the number of student fights in the high school. Burrell and Vogl (1990) reported that teachers noticed less fighting and disruptive behavior in inner-city Milwaukee middle and high schools as a result of their peer mediation program. Koch and Miller (1987) found that a peer mediation program at the middle school level decreased fighting and disruptive behavior.

The Metis Associates (1990) reported findings from an evaluation of the Resolving Conflict Crea-

tively Program implemented in the 1988-1989 school year at selected schools in New York City. They found that 70% of responding teachers observed that to a moderate or great extent children were demonstrating less physical violence in the classroom. Sixty-six percent of responding teachers observed less name-calling and fewer verbal put-downs among children. Sixty-three percent of responding teachers observed an increase in use of supportive comments. Sixty-nine percent of responding teachers reported that students had an increased willingness to cooperate. Seventy-eight percent of responding teachers observed more caring behavior. Seventy-one percent of responding teachers observed increased skill in understanding other points of view.

Parkhurst (1988), in a study of a conflict resolution program in grades 5-6 that involved teacher surveys and teacher observations, found an 80% decline in aggressive behavior and number of conflicts and an 80% increase in students' ability to solve problems peacefully. Maday (1988) reported on an evaluation of a peer mediation program in the sixth grade at Miles Elementary School. During the 1986-1987 school year, half of the sixth graders received instruction in ways to settle disputes peacefully, and 18 students were selected randomly to take 10 hours of advanced conflict manager training. At the end of the year, the principal reported no referrals of the trained students; the trained student perceived (a) their teachers as viewing them more favorably and (b) themselves as having engaged in fewer delinquent actions (such as physical violence, theft, and drug use). Teachers perceived the trained students as being more able to relate to adults and express themselves, and teachers believed that the program helped students become more assertive and verbal. Surprisingly, trained mediators did shout and swear at the teachers more frequently.

Umbreit (1991) investigated the effectiveness of mediation in a New York City school and found that suspensions decreased by 50%. Ferrara (1994) reported that a conflict resolution and peer mediation program reduced the number of suspensions. Berlowitz and Kmitta (1993), in an evaluation of a conflict resolution program in a Midwestern, inner-city elementary school, found that while the conflict resolution training had no overall effect in reducing discipline referrals or suspensions, the more experienced trainer had fewer discipline referrals originating from her classroom than did the less experienced trainers. Kmitta (1996) examined the impact of the students' Creative Response to Conflict Program during the 1993-1994 school year and found no significant differences between the experimental and control schools on overall discipline problems, although there was a nonsignificant trend toward reducing the most aggressive types of behaviors and the number of suspensions. In a study of a conflict resolution curriculum used in a Detroit school, Hammond and Yung (1991) reported that teachers and students perceived students as engaging in fewer violence-related school behaviors. Project Smart (1989) reported that suspensions dropped by 11%. Singer (1991) concluded that peer mediation decreased disruptive behavior in schools sharply and resulted in major decreases in suspensions. Jones and Carlin (1994) found that conflict resolution and peer mediation programs resulted in improved interpersonal communications. The Ohio Commission on Dispute Resolution and Conflict Management (1996) evaluated programs in over 30 schools in rural, suburban, and urban Ohio communities. They found that in one high school, the more frequent the peer mediation sessions, the fewer the in-school suspensions. A middle school reported a 50% decrease in suspensions (due to decreases in fighting, unruliness, and truancy) the year after a student peer mediation program was established. That decrease continued over the next 2 years, while the suspensions steadily increased at a similar middle school without a peer mediation program.

The results of these studies provide considerable evidence that conflict resolution and peer mediation programs do decrease discipline problems, violence, referrals, detentions, and suspensions. The data, however, should be interpreted with considerable caution. Most conflict resolution and peer mediation programs do not provide data about their impact on discipline problems, and, therefore, the data that are reported may not be representative. The data that are reported suffer from being correlational, self-report, and testimonials by individuals who are committed to the continuation of the programs. Conceptual models detailing how the conflict resolution and peer mediation programs result in less violence,

fewer discipline referrals, fewer suspensions, and fewer discipline problems generally have not been specified. While the data presented are suggestive and promising, very few carefully controlled and thorough research studies have ben conducted.

In addition to these problems, the data are suspect due to the lack of clear definition of the dependent variables. Concepts such as fight, discipline problem, referral, and suspension are ambiguous and may be defined in quite different ways by different researchers and different teachers; therefore, it is difficult to compare findings across studies. Third, several of the studies that reported a drop in the number of suspensions after a peer mediation program was implemented used peer mediation as an alternative to suspension. The claim that peer mediation reduced suspension in those cases is therefore meaningless, because any alternative to suspension would have caused a decrease in the number of suspensions. Finally, the wide diversity of conflict resolution and peer mediation programs makes it difficult to summarize their impact on dependent variables. What does it mean when the conclusion is reached that conflict resolution and peer mediation programs are effective because both Program A (learning about the nature of nonviolence) and Program B (learning communication skills) result in fewer suspensions? The heterogeneity among programs may increase the generalizability of the effort, or the issue of comparing apples and oranges may be raised. It is difficult to reach strong conclusions when there is ambiguity about the nature of (a) the programs being studied and (b) the dependent variables.

Impact of Conflict Resolution Training on Teachers, Principals, and Parents

There have been a few studies that examined the impact of conflict resolution and peer mediation training on teachers, principals, and parents (D.W. Johnson, R. Johnson, & Dudley, 1992; D.W. Johnson et al., 1994; D.W. Johnson, R. Johnson, Dudley, & Magnuson, 1995). The participating teachers and the school principal were interviewed in each study. All endorsed the conflict resolution and peer mediation program. The teachers, principals, and parents reported that students managed their own conflicts more constructively and independently and that the teachers and the principal therefore spent much less time resolving conflicts among students. Also, they reported that parental interest in the program was significant and positive.

Summary

The wide variety of conflict resolution and peer mediation programs that are being implemented in schools may generate a number of different outcomes. The evidence gathered by researchers indicates that students tend to perceive both negative and positive outcomes of conflict, and before training students often leave conflicts unresolved. After training, students tend to resolve conflicts through discussion and integrative (rather than distributive) negotiation procedures, students' attitudes toward conflict and the school climate tend to be more positive, students' psychological health and self-esteem tend to increase, discipline problems and suspensions tend to decrease, and school personnel and parents tend to become more positive towards the program. Peer mediation almost always produces a workable and stable (but often simple) agreement. The integration of conflict resolution training into English literature units tends to increase students' academic achievement. Outcomes that have not been documented in these studies are students' affect (negative versus positive), emotional investment in the relationship, perceived fairness of the agreement, whether interaction is discontinued or continued, and the quality of the relationship after the conflict is resolved.

Critique of Research: What Confidence Can We Have in Our Knowledge?

Conflict resolution and peer mediation programs have advanced significantly over the past decade. While practice has moved quickly (the number of schools in which programs may be found has multiplied), research and evaluation have lagged behind. There is a gap between practice and research. This article is an attempt to reduce that gap by gathering what is known about conflict resolution and peer mediation programs into one review. From this review of research it may be clearer what we do and do now know about the effectiveness of conflict resolution and peer mediation programs and their

impact on students and schools. What we do not know, however, may far outweigh what we do know. It is safe to say that this area of inquiry is in its infancy.

There are numerous problems with the research that does exist on conflict resolution and peer mediation programs. Many of the problems have been noted throughout this review. There are several other issues, however, that need to be raised concerning conceptual and methodological problems, length of study, reasons for problems, and the strengths of the research as a whole.

Theoretical and Conceptual Problems

The first and most important problem with the research is the lack of a theoretical base for most of the programs. The use of conflict resolution and peer mediation programs in the schools is a classical example of practice being developed separate and apart from the relevant theory and research. The programs originated by nonviolence advocates, anti-nuclear-war activists, and lawyers were developed on models other than the theories of constructive conflict.

This separation from theory creates considerable ambiguity in defining the nature of the programs being implemented (i.e., the independent variable), and it is therefore difficult to assess their effectiveness. Without knowing what exactly is taught to students and how it is taught, (a) the program cannot be replicated because there is no way to standardize the treatment, and (b) there can be no way to determine which aspects of the program had what effect on the dependent variables. Programs differ widely, from studying the life of Gandhi and the nature of nonviolence to learning communication skills to learning how to negotiate to learning how to mediate. There has been little attempt to identify and assess the relative contribution of the components of conflict resolution and peer mediation programs to the program's impact on the dependent variables. Common and differing elements among the various programs have not been identified. Even control groups cannot be effectively designed if the nature of the program is not clear. Until conflict resolution and peer mediation programs are clearly defined, their effectiveness cannot be reliably assessed.

In addition to the ambiguity about the definition of the independent variable (the nature of the program being implemented), there is ambiguity concerning the nature of many of the dependent variables. What is and is not a fight, what is a discipline problem, what constitutes a referral, when does suspension take place, and what is a constructive resolution of a conflict may all be defined in quite different ways by different researchers and educators. At the very least, ambiguity in the definition of dependent variables makes it difficult to (a) determine what is to be measured, (b) plan how to measure it, and (c) compare findings across studies.

A third problem with ambiguity concerns the nature of the mediating variables. In many cases there is not a direct relationship between the independent and dependent variables. Training in communication skills does not automatically result in fewer violent acts against classmates. Having one's conflict with a schoolmate mediated does not necessary improve one's ability to resolve conflicts constructively in the future. The variables that mediate the relationship between conflict resolution training and the frequency with which one manages conflicts in constructive ways need to be identified and clearly defined so that they can be measured. Students' commitment to use the procedures taught and students' self-efficacy concerning their use of the procedures, for example, may affect the relationship between the program and the dependent variables.

Finally, there is a general failure in many of the studies to build a bridge between the findings of the study and the field of conflict resolution. The studies do not test theory and therefore have very limited value in the long run. The theorizing and research on mediation in international relations, labor-management, disputes, divorce, child custody, criminal and victim reconciliation, and so forth have by and large not been utilized in the studies on peer mediation in the schools. The training programs used in schools could use the whole field of conflict resolution as a foundation, but instead they tend to stand separate and apart from more theoretical work.

Methodological Problems

There are numerous methodological problems that reduce the confidence one can have in the results

of the research studies. While many of the studies reviewed have high external validity (they were conducted in actual classrooms and schools), they have low internal validity. They did not randomly assign students to conditions, rotate teachers and trainers across conditions, use equivalent curriculum and activities in all conditions, and utilize behavioral measures of mediating and dependent variables. Many of the studies were short-term case studies with no control conditions, which limits the generalizability of the results. Even quasi-experimental designs are hard to find in the literature. Many of the studies included small samples of nonrepresentative students selected by teachers to be peer mediators. Many studies relied entirely or primarily on self-report data that included the respondents' ability to recall past events. For these and many other methodological reasons, the conclusions in most of the studies must be accepted very tentatively.

Many studies suffer from using dependent variables with low or unknown validity and reliability. A set of dependent measures needs to be developed and utilized that can then be used in a number of different studies so that their results can be compared. It is difficult to compare the results of different studies because they used different measures of the dependent variables. Valid and reliable measures of the dependent variables need to be developed and used in several different studies so that their results can be compared in a more systematic way.

There are problems with the limited nature of the dependent variables. The impact of constructively and destructively managed conflicts on disputants needs to be assessed. Destructively managed conflicts, for example, may be hypothesized to lead to depression, anxiety, behavior problems, and increased aggression, and constructively managed conflicts may be hypothesized to lead to greater ego strength, resilience, self-esteem, and happiness, but there are few data to confirm or disconfirm these hypotheses.

Finally, there is a problem with the scarcity of studies that actually document what takes place both in conflicts among students and in peer mediation sessions. Careful, moment-to-moment analyses of the patterns of interaction that lead to constructive and destructive outcomes both among disputants and between the disputants and the mediator need to be conducted.

Lack of Long-Term and Programmatic Studies

With two or three exceptions, there is a lack of systematic research programs in which a series of carefully designed and cumulative studies are being conducted. Most of the studies in this area are conducted as single studies that are not replicated or extended.

In addition, there are few longitudinal studies on (a) the impact of the training on participants and (b) the fidelity of the program over time. The issue of how learning to manage conflicts or mediate schoolmates' conflicts influences conflict management and relationships years later has never been explored. Do students utilize the procedures they were taught one year after the training? Two years? Ten years? The answers are unknown. Correspondingly, there are few studies of how well programs have been implemented and continued over several years.

Reasons for Problems

There are reasons why many of the studies are so poorly conducted. Most of the educators implementing conflict resolution and peer mediation programs do not have the resources to (a) hire research personnel to conduct careful and long-term evaluations or (b) obtain the training, time, assistance, and materials needed to conduct the research themselves. Many of the current studies are based on the efforts of dedicated educators who were willing to work far beyond what they were paid to do in order to help create a safe and orderly environment for learning and make a contribution to their students' future by teaching them how to resolve conflicts constructively. The hard work and dedication of the many people who have implemented the programs and conducted the studies discussed in this review need to be recognized.

Strengths

Finally, it should be noted that just as there are numerous problems with the research, there are also strengths. The wide variety of studies conducted by many different people in different schools in differ-

ent parts of the country and in several different countries adds considerable generalizability to the results. The variety of methodologies used in conducting the research gives the research added generalizability. As this review demonstrates, there is the beginning of a productive and fertile field of inquiry that has immediate practical application in schools.

Summary

Conflict resolution and peer mediation programs are being initiated in many school districts in response to the increasing frequency and severity of conflicts among students. These programs have been originated by researchers in the field of conflict resolution, advocates of nonviolence, anti-nuclear-war activists, and members of the legal profession. Despite the popularity of the programs, the claims of effectiveness by advocates are largely untested. Conflict resolution and peer mediation programs focus on managing conflicts of interest constructively. A conflict of interests exists when the actions of one person attempting to reach his or her goals prevent, block, or interfere with the actions of another person attempting to reach his or her goals (Deutsch, 1973). Both human development theories (psychoanalytic and cognitive developmental theories) and social psychological theories (social interdependence, structure-process-attitude/behavior, conflict strategies theories) posit that conflict is a necessary and positive aspect of human development and relationships.

While conflict holds both peril and promise for mutual success and social relationships, many of the advocates of conflict resolution and peer mediation programs point towards the perils of untrained students managing conflicts in destructive ways (as reflected in increasing violence in society and the schools). Actual data on the nature of conflicts in schools, however, have been lacking. At least 14 studies have been conducted on the types of conflicts students face in schools. Common types of conflicts are verbal harassments, arguments, rumors and gossip, physical fights, and dating/relationship issues. The occurrence of physical violence in schools may not be frequent, but the frequency of other forms of destructive conflicts among students should be of concern to educators.

In order to ensure that students manage conflicts in constructive ways, the classroom and school environments should provide a cooperative (not a competitive/individualistic) context. Within cooperative situations, communication tends to be open and honest, perceptions tend to be accurate and constructive, trust is built and maintained, and disputants are oriented toward maximizing joint outcomes. Within competitive situations, communication tends to be nonexistent or misleading, misperceptions are common, suspicious and hostile attitudes are present, and disputants strive to maximize their own gain at the expense of others. Problems exist in managing conflicts when the context is competitive/individualistic or when the context and the conflict resolution procedures are incongruent. The effectiveness of a conflict resolution and peer mediation program may be limited when the classroom and school context is competitive.

One of the best predictors of the outcomes of conflict is the strategy a disputant uses. The existing research indicates that untrained students of all ages rely on withdrawal and suppression of conflicts or use aggression for coercive purposes. Untrained students almost never use integrative negotiation procedures or strive to solve the problem in which a conflict is based. Older, more cognitively mature students may use reciprocation and cooperation more frequently in managing their conflicts than do younger students. Overall, there tend to be no differences in the conflict strategies used by untrained males and females. After participating in conflict resolution or peer mediation training, students tend to know the integrative negotiation and mediation procedures, retain that knowledge months after the training has ended, be able to apply the procedures in conflict situations, and spontaneously transfer the procedures to nonclassroom and nonschool situations. When placed in a situation in which either a distributive or an integrative negotiation procedure could be used, trained students tend to use the integrative procedure.

A wide variety of outcomes of conflict resolution and peer mediation programs have been investigated. Generally, students perceive both negative and positive outcomes of conflict. Before training, students often leave conflicts unresolved. After training, students tend to resolve conflicts through

discussion and integrative (rather than distributive) negotiation procedures, students' attitudes toward conflict and the school climate tend to be more positive, students' psychological health and self-esteem tend to increase, discipline problems and suspensions tend to decrease, and school personnel and parents tend to become more positive toward the program. Peer mediation almost always produces a workable and stable (but often simple) agreement. The integration of conflict resolution training into English literature units tends to increase students' academic achievement.

While there are numerous problems with the research on conflict resolution and peer mediation programs, there can be little doubt that conflicts among students do occur frequently in schools and that untrained students by and large use conflict strategies that create destructive outcomes by ignoring the importance of their ongoing relationships. Conflict resolution and peer mediation programs do seem to be effective in teaching students integrative negotiation and mediation procedures. After training, students tend to use these conflict strategies, and constructive outcomes tend to result. Students' success in resolving their conflicts constructively tends to reduce the numbers of student-student conflicts referred to teachers and administrators, which, in turn, tends to reduce suspensions. There is still, however, a long way to go before conflict resolution and peer mediation training is managed constructively in every classroom and school.

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In Search of Effective Character Education

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The 1990s is not the first time in our history that character education has captured the attention of American educators. In the first three decades of this century, character education became a major preoccupation. Such factors as increasing industrialization and urbanization, the continuing tide of immigration, World War I, the Bolshevik Revolution, and the spirit of the Roaring '20s, contributed to a mood among the population and among educators that social stability was being threatened and that moral standards needed to be strengthened. During the 1920s and 1930s, virtually every school in America was responding in some way to the educational goal of developing character (McClellan 1992, Yulish 1980).

The current revival of interest in character education, if it is to succeed, will have to successfully address the question of the assessment of program effectiveness. Today, unlike the beginning of this century, a body of research exists related to the topic of educating for character that can, if utilized and expanded, inform practice and assist in the development of effective programs.

The Early Character Education Movement

The character education movement of the first three decades of this century utilized elaborate codes of conduct and group activities in school clubs as the primary means to teach character (McClellan 1992, McKown 1935). A widely used code of conduct was the "Children's Morality Code," which emphasized "ten laws of right living": self-control, good health, kindness, sportsmanship, self-reliance, duty, reliability, truth, good workmanship, and teamwork (Hutchins 1917). Schools attempted to integrate such codes into all aspects of school life, and student clubs that harnessed the power of peer influence were created to encourage students to practice the virtues.

Between 1924 and 1929, the Institute of Social and Religious Research, funded by John D. Rockefeller and housed at Teachers College, Columbia University, undertook the Character Education Inquiry, the most detailed and comprehensive inquiry to date into the nature of character and the school's role in its development (Hartshorne and May 1928-1930). The study assessed the character-related behavior of 10,865 youths, mostly in grades 5 through 8, in 23 communities across the United States, focusing on student deceit and service. In schools where character education was taking place, the researchers created classroom situations that provided students with opportunities to cheat and to voluntarily engage in helping behavior. They found that the incidence of deceit varied widely in classrooms and schools and that deceit was situationally specific; honesty in one situation did not predict well to another. Furthermore, they found no relationship between membership in organizations that purported to teach honesty and honest behavior. Among the many disturbing conclusions within the 1,782 pages of text is the following:

> The mere urging of honest behavior by teachers or the discussion of standards and ideals of honesty, no matter how much such general ideals may be "emotionalized," has no necessary relation to conduct....there seems to be evidence that such effects as may result are not generally good and are sometimes unwholesome....the prevailing ways of inculcating ideals probably do little good and do some harm.

The Character Education Inquiry raised serious questions regarding the effectiveness of heavily didactic approaches to character education.

Moral and Values Education

By the 1950s, character education curriculums had all but disappeared in American schools. The

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year 1966 signaled the beginning of a new period of interest. In the *School Review*, Lawrence Kohlberg for the first time linked his cognitive-developmental theory of moral reasoning with the practice of moral education in schools (1966). Louis Raths, Merrill Harmin, and Sidney Simon coauthored *Values and Teaching*, the highly influential first statement of the theory and technique of values clarification (1966). Although not the only approaches advocated, moral dilemma discussion and values clarification dominated the field of moral education for the next 20 years and were extensively researched.

How much impact these two approaches had on educational practice is difficult to judge. The values clarification approach was by far the more popular with teachers; one handbook of strategies for values clarification sold 600,000 copies (Kirschenbaum 1992), an almost unheard of figure for an education methods textbook.

Although the two approaches were different in many ways, they both emphasized that teachers were not to moralize. In Kohlberg's moral dilemma discussion approach, the teacher facilitated student reasoning, assisted students in resolving moral conflicts, and ensured that the discussion took place in an environment that contained the conditions essential for stage growth in moral reasoning. Values clarification sought to have each student clarify his or her values by following the prescribed seven-step valuing process. The teacher only facilitated the valuing process and, for fear of influencing students, withheld personal opinions. The teacher was to respect whatever values the students arrived at.

All of the reviews of the moral discussion research program have reached similar conclusions (Enright et al. 1983; Lawrence 1980; Leming 1981, 1985; Schlaefli et al. 1985); namely, that in approximately 80 percent of the semester-length studies a mean upward shift in student reasoning of one-fourth to one-half of a stage will result when students are engaged in the process of discussing moral dilemmas where cognitive disequilibrium and exposure to examples of the next highest state of moral reasoning are present.

The achievement of the predicted results of the moral discussion approach must be interpreted cautiously. First, the stage growth found as a result of the moral discussion approach is in stages 2, 3, and 4 and is small—usually less than one-third of a stage for interventions of at least one semester. Second, none of the moral dilemma studies reviewed used any form of social or moral behavior as a dependent variable. Kohlberg and his associates did argue that moral reasoning and moral behavior were related at the highest stages, the stages of principled reasoning (Kohlberg and Candee 1984); however, analyses of the evidence have detected only weak associations (Blasi 1980). One study found that among 4th and 8th grade students, stage 1 and stage 3 of moral reasoning are associated with fewer conduct problems than stage 2 reasoning (Richards et al. 1992). This finding raises the interesting possibility that raising students' reasoning from stage 1 to stage 2 may be associated with a deterioration in student conduct. Thus, even though the moral dilemma approach "works," it appears to be of little practical utility in influencing students' behavior.

Research findings of the values clarification approach are also highly consistent: they show no significant changes in the dependent variables (Leming 1981, 1985, 1987). Whereas research on the moral dilemma approach involves only a single dependent variable (stage of moral reasoning), the values clarification research program contains a wide range of dependent variables such as values thinking, self-concept, attitudes toward the subject matter and the school, dogmatism, and values-related behavior. While the percentage of the studies finding the predicted results varies from dependent variable to dependent variable, the predicted change in a given variable is seldom found in more than 20 percent of the studies (Leming 1987). The research base for the moral and values education curriculums of this period offers little assistance in planning for character education where change in student behavior is a central objective.

Research on Sex and Drug Education

Two research programs that have evolved over the past 30 years, although not typically described as moral or character education, have focused on character-related student behavior: sex and drug education. In his seminal review, Kirby (1980) concluded that sex education programs generally increase stu-

dent knowledge about sexuality, change some attitudes—students become more tolerant of the sexual practices of others—but do not change students' values or sexual behavior. Most researchers in this field are in unanimous agreement (Dawson 1986; Furstenberg et al. 1985; Hofferth and Miller 1989; Kirby 1980, 1984; Marsiglio and Mott 1986; Reppucci and Herman 1991; Stout and Rivara 1989).

The most recent development in the field of sex education is value-based programs. These programs place sexuality within the context of human relationships and emphasize values such as respect for others, personal dignity, commitment, self-control, and abstinence. Two recent programs, one short-term and one long-term, illustrate the nature and level of effectiveness of these programs.

The Responsible Sexual Values Program in Franklin County, Ohio, presents a three-day instructional unit at the middle school level that integrates information about human sexuality, marriage, and parenting skills with group activities (Adamek and Thoms 1991). After the curriculum has been presented, volunteer student organizations provide peer support for the norm of abstinence. In addition, parents attend a two-session workshop on the goals of the program and participate in students' homework assignments. The first-year evaluation of the program indicated that student knowledge of sexuality increased, as did attitudes supportive of the abstinent lifestyle; however, by the fifth year any effects on attitudes and behavior had disappeared (Adamek 1993). Problems with faithful implementation of the program, as well as the increasing power of peer group norms, apparently combined to overwhelm any possible program effects.

A similar, but broader and more intensive value-based program is the School/Community Program for Sexual Risk Reduction Among Teens, developed at the University of South Carolina (Vincent et al. 1987). The K-12 program integrates value-based sex education information and activities within regular school subjects. Implemented on a countywide basis, the program involved not only parents but also clergy, church leaders, local newspapers, and radio stations. Special events raised community awareness. Two years following the implementation of the program, estimated pregnancy rates for females aged 14-17 had declined.

Value-based sex education that involves schools, parents, and the community in a common effort to encourage responsible sexual behavior appears to have some potential for changing adolescent attitudes and sexual behavior; however, due to the relatively few number of evaluations, caution should be used in attempting to draw generalizations from the data.

Three Waves of Drug Education

Both the public and teens see substance abuse as one of the most important problems facing America today. In the past 30 years there have been three broad shifts in the approach to drug education. Throughout the 1960s, drug abuse education largely provided information regarding the deleterious effects of drugs and used scare tactics to deter students from substance abuse. The "affective" or "humanistic" strategies of the early-to-mid 1970s focused on teaching students personal skills such as problem solving and decision making and sought to develop positive health-related attitudes.

Reviewers of the research on these first two waves of drug abuse curriculums uniformly concluded that these programs tend to be successful in increasing knowledge, but less successful in changing attitudes; they have little or no effect on drug and alcohol abuse (Berberian et al. 1976, Kinder et al. 1980, Schapps et al. 1981).

Drug education in the 1980s shifted to the "social influences" strategy. This peer-centered approach tried to make students aware of the social factors that create pressures to use drugs and to help students develop the skills to resist those pressures through role-playing in class. Group activity and the discussion of personal experiences seek to develop group norms against drug abuse.

Three recent program evaluations conducted with upper elementary or junior high school students suggest that this approach has promise. Flay and associates found that a six-lesson smoking unit resulted in reduced smoking behavior (1985). Dielman and associates found that a four-lesson social influence program reduced the rate of increase of alcohol

use among 6th graders who had already begun to use alcohol (1989). Ellickson and Bell found that their eight-lesson program reduced alcohol and tobacco use among junior high school students but did not sustain the reduction over time with regard to alcohol use (1990).

Reported data from the first two years of the Midwestern Prevention Project also support the social influences strategy (Pentz et al. 1989). A longitudinal trial of a primary prevention program of cigarette, alcohol, and marijuana use, this comprehensive, community-based program uses school study, parent involvement with homework, the mass media, community organization, and health policy programming to combat adolescent drug use. The entire adolescent population from 15 Midwestern communities constitutes the sample. In the first two years, 22,500 6th and 7th grade students were exposed to the program. By the second year of what is to be a six-year evaluation, the use of all three target drugs was lower among students in the program for one year than among students just entering the program.

From the review of drug education programs, we can conclude that (1) gains in knowledge were common to all such programs; (2) lecture appears to have the smallest effect on attitudes, while peer programs have a greater influence; and (3) social influence programs appear to be the most effective in reducing the incidence of drug usage. Although effects declined in all the programs over time, such attrition was generally less substantial in the social influence programs.

The Impact of School Atmosphere

Introducing another angle on character education, a number of school-based research projects have investigated the relationship between school atmosphere and student behavior.

One of the major educational success stories over the past decade is the use of cooperative learning strategies. In cooperative learning, students are placed in small groups where the group learning assumes central importance and students are responsible not only for their own learning but also for the learning of others.

This type of learning environment organization has resulted in impressive student achievement and positive social values and behavior. Reviews of the extensive literature on this topic have found that in addition to increasing academic achievement, students learned to get along better with students of other races and ethnic groups, were more accepting of mainstreamed students, demonstrated greater mutual concern for one another, and were more likely to engage in prosocial behavior (Johnson et al. 1981, Slavin 1990).

Another approach that emphasizes student responsibility is the just community approach developed by Lawrence Kohlberg and his associates. In the late 1970s, Kohlberg revised his perspective on moral education, emphasizing collectively derived social norms rather than individual values as a goal of moral education (Kohlberg 1978, Power et al. 1989). This new emphasis grew out of Kohlberg's experiences chronicling the democratic development of norms required to organize the social environment in small alternative schools.

In the just community approach, students confront real problems related to the social organization of the school. Within a democratic context, students discuss group problems and develop the norms by which group life is organized. For example, in a four-year study of the Cluster School in Brookline, Massachusetts, Power and Reimer identified four problematic areas in the life of the school: race relations, stealing, drug usage, and absenteeism (1978). Through a process of collective deliberation, students and teachers proposed and agreed on norms for behavior. The group then enforced compliance. Because this approach harnessed strong peer pressure within a democratic context, students eventually modified antisocial behavior in three of the four normative areas. In the case of drug usage, no collective norm emerged because the students did not share the teachers' perception that such a norm was needed.

While the just community research is based on an atypical educational setting, there are encouraging data from research on school climate in more typical school settings. Several studies have shown that schools that seem to have an impact on student character respect students, encourage student par-

ticipation in the life of the school, expect students to behave responsibly, and give them the opportunity to do so. Discipline is not always imposed, but within the framework of shared group norms, students accept discipline as legitimate and change their behavior accordingly (Minuchin et al. 1969, Boesel 1978, Coleman et al. 1981, Rutter et al. 1979).

Recently, community service programs have gained popularity as a potential means for shaping youth character (Nathan and Kielsmeier 1991). Such programs place students in activities designed to exert a positive influence on the community. Studies of earlier but similar programs have detected only small effects on students' sense of civic responsibility as a result of these programs (Conrad and Hedin 1982, Holland and Andre 1987, Rutter and Newmann 1989). This pattern of results may be due in part to the inability to control the nature of the students' experiences in the field setting, resulting in uneven and less than desirable experiences for many students. In addition, the programs were electives, and student commitment varied.

Contemporary Character Education Programs

With striking similarity to the 1920s, the late 1980s and early 1990s have been a time of feverish activity with regard to character education (Lickona 1991, National School Boards Association 1987). Also like the 1920s, few of these new character education programs have systematically evaluated their effects on children.

Two approaches exist to the evaluation of contemporary character education programs. The first relies on informal evaluations that collect anecdotal evidence or survey teachers and administrators; it does not attempt to control for potential bias in information on student behaviors, nor does it compare students within the programs with nonprogram students.

One program that uses informal evaluation is the American Institute of Character Education in San Antonio, Texas, which produces character education curriculum materials for grades K-6. The curriculum consists of posters and a set of stories that illustrate values such as honesty, kindness, and generosity. Teachers discuss the stories with the students and make the students aware of the relevance of the values in their lives.

By the late 1980s, the Institute claimed to have reached as many as 18,000 classrooms in 44 states with its curriculum. Supporters assert that the program has reduced alcohol and drug abuse, encouraged school attendance, and discouraged vandalism, but these claims are supported entirely by testimonials (Goble and Brooks 1983).

A second character education program that has only informal data on its effectiveness is that of the Jefferson Center for Character Education. The Jefferson Center program attempts to teach the language of values such as honesty, perseverance, respect, and tolerance. Teachers help students learn the words, understand the concepts, and finally recognize and practice the appropriate behavior. The schoolwide program utilizes examples from the students' experiences and the school environment to reinforce the value behaviors.

Beginning in the fall of 1990, 31 elementary and middle schools in Los Angeles, California, implemented the program. In the fall of 1990 and in the spring of 1991, 20 elementary and 5 middle school administrators were asked by phone to assess the program's effectiveness. The administrators stated that all forms of reported discipline problems had decreased, student morale had increased, parents had become more involved in the life of the school, and students were acting more responsibly (Satnick 1991).

The second evaluation approach utilizes experimental designs, focuses on student behavior, compares program students with nonprogram students, and attempts to control for potential sources of bias. Two recent character education programs that have assessed their effectiveness through controlled research efforts are the Weber County Character Education project and the Child Development Program.

The Weber County K-6 program in Utah is based on a five-step teaching model that (1) stimulates interest in a principle, (2) models the principle, (3) integrates the principle with prior knowledge, (4) involves parents with homework, and (5) extends principles learned into real-life situations. The pro-

gram currently involves 3,000 students and 109 teachers.

A grant from the Thrasher Foundation has enabled the Institute for Research and Evaluation of Salt Lake City, Utah, to undertake a longitudinal study of the effect of the Weber County program on the character of youth (Weed 1993). Over a two-year period, teachers in the program classrooms reported a statistically significant two-and-one-half-times reduction in problem behavior in students. In contrast, problem behavior in control schools actually increased. Additionally, it was found that students who had been in the program for two years and had moved into 7th grade scored significantly better on attitudes against substance abuse and in favor of positive school conduct than did nonprogram students.

A second controlled evaluation of a character education program is that of the Child Development Project in San Ramon, California (Solomon et al. 1987). Supported by an initial grant from the Hewlett Foundation, this project implemented a K-6 character education program in three elementary schools. The curriculum consists of five components: (1) teacher highlighting and exposing students to prosocial examples; (2) cooperative learning activities; (3) use of children's literature and classroom incidents to develop respect, sensitivity, and understanding toward others; (4) involving children in helping relationships; and (5) fostering moral reasoning and self-control through student-centered developmental discipline.

The program has been formally evaluated using a longitudinal design that tracked students over a seven-year period from kindergarten through 7th grade (Benninga et al. 1991). The evaluation collected data using hypothetical-reflective interview measures of social problem-solving skills and observational data on four types of classroom behavior: (1) supportive and friendly behavior, (2) negative behavior, (3) spontaneous prosocial behavior, and (4) harmoniousness.

The study found that after five years in the program, students scored significantly higher on measures of sensitivity and consideration of others' needs. In addition, they preferred conflict resolution strategies that were more prosocial (Battistich et al. 1989). The program's impact on character-related student behavior showed mixed results. No difference was detected between comparison students and program students with regard to the incidence of negative behaviors. On the other three behavioral variables, the evaluation did detect a significant difference favoring the schools using the program when data from all five years were combined. These differences, however, were not consistent across all grade levels (Solomon et al. 1988), and when cooperative group activities and teacher competence were used as covariates, no program effect was detected on the variable of harmoniousness.

The evaluation also followed a group of program students into junior high school, obtaining positive results on a wide range of variables such as democratic values, social understanding, feelings of loneliness, social anxiety, and higher-order reading comprehension. Out of a total of 105 program versus comparison tests, however, only in 11 cases did these tests favor the program students (Developmental Studies Center 1993).

The original six-year evaluation found that the detected prosocial behaviors did not generalize outside of the program classrooms and classmates (Solomon et al. 1987). The junior high extension data found that teachers did not rate the prosocial behavior of program students any different from comparison students (Developmental Studies Center 1993). In this regard, the results from the Child Development Program are consistent with the findings of Hartshorne and May (1928-1930); namely, character-related behavior and moral behavior tends, to a large extent, to be situationally specific.

What We've Learned So Far

With the caveat that the present research base is small, disparate, and inconsistent, we can offer the following observations.

- Didactic methods alone—codes, pledges, teacher exhortation, and the like—are unlikely to have any significant or lasting effect on character.
- The development of students' capacity to reason about questions of moral conduct does not result in a related change in conduct. Appar-

ently, one cannot reason one's way to virtuous conduct.

- Character develops within a social web or environment. The nature of that environment, the messages it sends to individuals, and the behaviors it encourages and discourages are important factors to consider in character education. Clear rules of conduct, student ownership of those rules, a supportive environment, and satisfaction resulting from complying with the norms of the environment shape behavior.
- Character educators should not expect character formation to be easy. Schools that expect easily achieved and dramatic effects will be disappointed.

Several limitations of the current research are worth noting.

- The majority of programs have been limited to elementary schools. Given that the rise of the current character education movement has been prompted largely by adolescent risk-taking behavior, this focus is somewhat puzzling. Because research with adolescent samples has shown that it is difficult to sustain program effects over time, it is important that research on character education for this group receive intensive attention.
- Few carefully controlled evaluations of character education programs exist. Research cannot inform practice with only informal evaluations of low generalizability.
- All studies that have utilized multiple classrooms have detected considerable variations in program effects between classrooms. One possible explanation is differences in program implementation. Another possible explanation is the nature of the teacher and the climate established in that classroom; some exemplary teachers may naturally establish classroom climates that promote good behavior. As in the Character Education Inquiry, we need to recognize that classroom differences are the rule, rather than the exception (Hartshorne and May 1928).

Finally, those interested in character education have long believed that morally inspiring literature should be a part of any character education program. Surprisingly, not one research study has attempted to assess whether reading such literature has the expected effect on character.

Future Directions

If character education in the 1990s is to avoid the "confusion and lack of clear knowledge" that beset character education efforts in the 1920s (Yulish 1980), a research base to inform practice must be developed.

A useful theoretical perspective that has some potential for unifying the field of character education is found in the works of individuals as diverse as Aristotle, Emile Durkheim, John Rawls, and Lawrence Kohlberg. These authors believe that three levels of development related to the formation of character exist. At the lowest level, rules are external to the child and behavioral conformity is assured through discipline and self-interest. At the next level, rules are embodied in social groups, and compliance with the rules is the result of youths' desire to gain acceptance within that group. At the highest level, rules are interpreted in terms of self-chosen principles.

Existing research supports this framework. That character is fostered by clear rules—fairly enforced—and by orderly classroom and school environments suggests that discipline is an essential element of moral education. The influence of cooperative learning methods and just community environments on student character suggests mechanisms by which schools can utilize the dynamics of attachment to groups in a positive pro-character manner. In addition, the newest wave of sex and drug education programs that elicit help from peers, parents, and community in defining and supporting appropriate behavior have been found to be the most effective to date in changing student behavior. Finally, the moral dilemma discussion methodology provides a means by which schools can assist youths in the development of their moral reasoning so that, as adulthood approaches, they develop the capacity for principled moral reasoning.

The development of a "grand theory" of character education and research based on that theory is a crucial next step in the future of character education. At present, atheoretical thinking and research on character education hampers the effort to develop

effective programs. The current research in the field consists of disparate bits and pieces of sociology, philosophy, child development research, sociopolitical analyses, and a variety of different program evaluations. While such diversity is inevitable, character education needs to develop a more coherent view that can integrate the available research, provide focus to the movement, and guide the curriculum planning and research in a way that yields cumulative knowledge regarding the schools' role in fostering character.

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Community Service-Learning in the Social Studies: Historical Roots, Empirical Evidence, Critical Issues

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Introduction

How are social studies teachers to prepare future citizens for living in a society fraught with social, environmental, and economic problems? If the true mission of our profession is active citizenship, we must help our students learn the value of engaging in long-term efforts to revitalize our democratic society and, at the same time, assist them in developing the skills to respond compassionately to those whose daily needs cannot wait for societal transformation. This paper is based on the premise that community activism holds a central place in social studies education. Given the social studies' professed goal of active citizenship, "it follows that the success or failure of the social studies may be gauged by the extent to which the citizenry takes a reflective and active part in the political and social life of the community" (Ferguson 1991, p. 385). The central question guiding our investigation in this paper is the following: Is the inclusion of community service-learning in the social studies curriculum likely to contribute to students' future involvement in the political and social life of the community? Our answer to this question is a qualified and cautious "yes."

Following a brief definition of service-learning, we explore the potential service-learning holds for social studies education in contemporary U.S. schools. Next, we trace the current interest in service-learning to the historical roots of civic involvement in the social studies. The central part of the paper focuses on a critical evaluation of the research on service-learning in K-12 school programs. Finally, we raise several critical issues for the practice of service-learning in social studies education and offer promising avenues for further research.

In addition to emphasizing the role of community involvement in the social studies, joining historical and empirical evidence in this paper makes an important methodological contribution to the social studies literature. Historical researchers often stop short of providing key connections between past and contemporary educational efforts. Likewise, empirical researchers often fail to plumb the historical mines for earlier work that would greatly inform their research. We hope to interest other social studies researchers in blending both historical and empirical efforts for the benefit of both. Our approach here illustrates how current interest in service-learning is not a new phenomenon, but rather a conceptualization of a rich legacy of civic involvement throughout the history of social studies education in the United States.

Community Service-Learning: A Definition

Community service is a long standing tradition in U.S. society that has recently engendered great interest in the educational arena, notably through the blending of service and academics known as service-learning.[1] Service-learning can take a variety of shapes and forms, making its definition a challenging task. In recognition of the need for a widely agreed-upon definition and a set of standards by which to judge service-learning programs, a diverse group of service-learning educators formed the Alliance for Service-Learning in Education Reform (ASLER). ASLER's (1993) definition of service-learning is as follows:

> Service-learning is a method by which young people learn and develop through active participation in thoughtfully-organized service experiences: that meet actual community needs, that are coordinated in collaboration with the school and community, that are integrated into each young person's academic curriculum, that provide structured time for a young person to think,

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> talk, and write about what he/she did and saw during the actual service activity, that provide young people with opportunities to use newly acquired academic skills and knowledge in real life situations in their own communities, that enhance what is taught in the school by extending student learning beyond the classroom, and that help to foster the development of a sense of caring for others (p.1).

Thus, service-learning must not be seen as an extra-curricular volunteer activity; rather, it is a pedagogical method in which service projects form the basis of learning. Through careful planning on the part of the teacher and students, service-learning can be a vehicle for enriching the curriculum. Service-learning can also address critical community needs, and in the process, help students make the school-to-life connections so vital to meaningful learning and democratic participation.

Many service-learning projects address the needs of the elderly, people with disabilities, animals, or the environment. While these projects are all focused on active citizenship, social studies educators can also develop activities more suited to their curricular objectives. For example, elementary students might study the historical buildings in their community and work on helping restore one site. High school students might conduct a voter registration campaign, including making presentations to groups who are typically underrepresented in the voter pool. As part of a unit on immigration and U.S. citizenship, middle school students could interview recent immigrants in their community and take care of the children while their parents study for the U.S. citizenship test. All of these projects could involve academic study of related social studies topics. The service experience then becomes the motivation and the central activity for connecting social studies knowledge, attitudes, critical thinking, and civic behaviors.

The Potential of Service-Learning

The potential of service-learning must be situated within the context of our democratic society. Democracy is characterized by both rights and responsibilities. At its core, democracy upholds respect for the dignity of the individual and the right of all citizens to participate in decision making (Engle & Ochoa, 1988). A democracy in many ways should be an open society, where individuals have the right to dissent, where differences are accepted, and where efforts to change and improve the quality of life are commonplace.

While these ideals of democratic life have not varied much over more than two centuries, in practice our democracy has gone through numerous changes and transformations. As the scale of our social and political organization has grown, the sense of our collective identity as a people with common needs and purposes has become more fragmented. Bellah and his colleagues (1985) noted that many Americans feel isolated from their institutions—schools, governments, and churches. Institutional problems seem too large, too complex; the result is frustration, lack of trust, and ultimately withdrawal from active involvement in the decision making process. As just one example of this fact, the mean voter turnout for Presidential elections in the United States since World War II has hovered around 50 percent, the lowest percentage for any noncompulsory democracy in the West (Barber 1984). A democracy lacking in participation by the majority of its constituents is a democracy at risk.

Unfortunately, U.S. youth are not immune to apathy. Since the mid-1960's, there has been growing concern about young people's involvement (or lack of it) in the social and political lives of their communities. "Charges of increased privatism, hedonism, and aimlessness among adolescents have become commonplace among findings that they feel powerless in relation to the larger society and have no sense of fulfilling a significant role in it" (Conrad 1991, p. 541).

Numerous studies confirm young people's disengagement from political involvement in particular. For example, a 1989 study by People for the American Way found that youth equate being a good citizen with being a good person, rather than with being politically engaged. They tend to see the political process and national affairs as alien to them and feel no compulsion to participate in politics.

Where do we turn then in our efforts to inspire youth to participate in democratic life? Given its

purpose, one would hope that the social studies curriculum might help alleviate the apathy toward civic involvement among U.S. citizens. Results in this area, however, are decidedly disappointing. Numerous studies have revealed that students find social studies boring or uninteresting (Morrissett, Hawke, & Superka 1980; Schug, Todd, & Berry 1984; Shaver, Davis, & Helburn 1979). Despite a variety of curricular innovations over the last 25 years, the majority of efforts at teaching citizenship in the schools fall on the shoulders of narrowly conceived social studies courses that in most cases have failed to engender student interest, involvement, or competence in political life (Ferguson 1991). Research on civic education generally shows that classroom climate and school governance have some positive effects on students' political attitudes and efficacy; the effects of civics and government classes on these outcomes are largely negligible (Battistoni 1985; Ehman 1978; Hamilton & Zeldin 1987; Marker 1980; Niemi & Junn 1993; Seigel 1987).

How might service-learning address the ineffectual social studies curriculum and nation-wide apathy toward civic involvement? First, service-learning by its very nature involves students in their communities, working on issues of local concern, attempting to make a difference. Habits of mind and heart as well as the skills needed for effective civic action are learned through real life efforts, rather than just read about in social studies texts. Second, service-learning tends to break down the hierarchical barriers in schools and provides opportunities for youth to play a significant role in their own learning (Caskey 1991). Teachers, students, and community members are more likely to work together; teachers serve as process facilitators rather than just information providers (Wade 1995a).

While service-learning can be included in many different subject areas, the social studies is in a unique position to take part in the growing national service-learning movement. Although social studies educators differ in their opinions about what constitutes citizenship (Shermis & Barth 1982; VanSledright & Grant 1991), many have promoted citizenship as informed and active involvement in the social and political life of the community (Barber 1989; Clarke 1990; Engle & Ochoa 1988; Parker & Jarolimek 1984; Rutter & Newman 1989; Schug & Beery 1984; Thomas 1984). Numerous National Council for the Social Studies (NCSS) documents feature social and political participation as essential aspects of social studies instruction (NCSS 1979, 1980, 1989; Hartoonian & Laughlin 1990). Most recently, the Curriculum Standards for the Social Studies (1994) includes an emphasis on civic participation in the Civic Ideals and Practices strand. Key questions learners should confront in this strand include "What is civic participation and how should I be involved?...What is the role of the citizen in the community and the nation, and as a member of the world community? How can I make a positive difference?" (NCSS 1994, p. 30). It is important to note that interest in civic participation in the social studies is not a new phenomenon. We turn now to an exploration of the legacy of community involvement in the history of social studies education.

Civic Involvement in the Social Studies: Historical Roots

Social studies was specifically developed in response to the need for cultivating an active participatory citizenship (Dunn 1916). At the turn of the century, as the very real effects of shifting from an agricultural and rural society to an industrialized and urban society were more fully grasped, educators and civic leaders recognized the importance of an active citizenship education. Today, while the rural to urban shift is no longer at issue, service-learning as a model to improve community life remains important.

The roots of participatory social studies were set down in the two decades before the mass European immigration at the turn of the 20th century (see Patterson 1987 and Marker 1980). With service-learning conceptualization in place and accepted by civic leaders by the 1910's, many educators moved to institute service-learning in urban schools.

It is important to note that the beginnings of service-learning and its subsequent history should be separated from the sort of social action programs more closely identified with social reconstruction programs dating from the 1930's. Criticism of service-learning at that time is represented by the follow-

ing quote from Paul Hanna's (1936) book *Youth Serves the Community*.

> Time and energy given to such superficial betterment [Hanna gives as an example making Thanksgiving baskets for poor families] could much more efficiently be spent in getting at the basic inhibiting influences which perpetuate a scarcity economy in the midst of abundance. (Hanna as cited in Kahne & Westheimer, pp. 596-7)

Despite differences of opinion about the most effective forms of civic education, government and educational leaders clearly understood its importance as cities continued to parallel the growth of industry. At the turn of the century, citizenship education was focused on an introduction into American government where the rather passive "how a bill becomes a law" type of learning was standard fare. The idea of exploring community resources as part of a citizenship education program was not fully realized until the early 1900's. Arthur Dunn (1906, 1915, 1916, 1922), who was later to serve on the seminal 1916 Social Studies Committee, offered community civics in Indianapolis schools as early as 1904. Dunn was one of the first public school educators to specifically require service-learning in his classes. Dunn had students identify problems in the community. Then, working in collaborative teams, Dunn's students developed solutions which they actually applied in the community. Dunn's work caught the attention of civic leaders who were keenly interested in educational approaches to urban problems. When Dunn joined the Social Studies Committee in 1915 he influenced members to include service-learning activities as an integral part of the developing social studies program. The service-learning idea was incorporated into two social studies course offerings, Community Civics for ninth graders and Problems of Democracy for twelfth graders (Franklin 1986; Saxe 1991).

Perhaps the earliest description of service-learning was written by the community civics subcommittee of the 1916 Social Studies Committee headed up by Dunn (Barnard et al. 1915).

> The good citizen may be defined as a person who habitually conducts himself with proper regard for the welfare of the communities of which he is a member, and who is active and intelligent in his cooperation with his fellow members to that end. (Barnard et al. as cited in Saxe 1991, p. 188)

Service-learning, what the committee then called community civics, was to be offered throughout the grades with an intensive "five periods a week" course in the freshman year of high school. The three "specific aims" of community civics were: (1) "to see the importance and significance of the elements of community welfare," (2) "to know the social agencies, governmental, and voluntary, that exist to secure these elements," and (3) "to recognize his civic obligation, present and future, and to respond to them by appropriate action" (Barnard et al., as cited in Saxe 1991, p. 191-192). It was quite clear that Dunn and his colleagues argued for active citizenship now as well as in the future (Dunn 1906, 1922). Moreover, the committee members highlighted that "the teachers must help the pupil to express his convictions in word and deed. He (the student) must be given an opportunity... to *live* (italics from original) his civics both in school and in the community outside" (Barnard et al. as cited in Saxe 1991, p. 193).

Some of the suggestions made by the subcommittee were drawn from Dunn's earlier works (1906, 1915). The focus of community civics was on community health, with the following noted as important: protection for food and drinking water, pure air, exercise, cleanliness, avoiding contagion, restriction on use of drugs, regulation of alcohol and tobacco, proper working conditions, shoveling snow, ambulance service, and child labor. Students were also directed to protect younger children and older citizens. The emphasis was clearly on "what the child can *do* (italics in original) for the community," not what the community can do for the child. Children were encouraged to "observe, inquire, and discuss" problems of the community and ask themselves "what should be done?"

As the concept moved from theory into practice, a number of textbooks were written for both Community Civics and Problems of Democracy (Barnard & Evans 1919; Burch 1921; Burch & Patterson 1919; Dunn 1922). The First World War also

brought about further collaborative activities to benefit local communities. For example, scrap rubber, metal, and paper drives were common among young people. Other conservation efforts such as "grow your own" campaigns also encouraged active participation from school-aged children. By the early 1920s, social studies became identified as progressive, egalitarian, and community-centered curricula (Cremin 1961; Drost 1967; Saxe 1991; Warren 1989).

In contrast to the progressive social studies, prevailing history-centered curricula, in place since the end of the 19th century, were viewed by many as elitist, traditional, and non-activist (Rugg 1922). On the one hand, social studies as it was formulated encouraged teachers to implement the service-learning "community civics" programs. On the other hand, as history supporters began to share curricular control (sometimes unwillingly) of school curricula by the late 1920s, social studies soon became the umbrella organization that included both community civics and the more passive traditional history and other subject-centered social studies.

In practice, service-learning soon became identified with only certain segments of the overall social studies program. As noted earlier, the Community Civics and Problems of Democracy (POD) courses outlined in the inaugural social studies program (Dunn 1916) were focused on community-based service-learning. However, as these courses appeared in school curricula, coupled with the dramatic increase in high school enrollments, the focus on service-learning was soon dropped. Although Community Civics lasted less than a decade and POD largely disappeared by the 1950's, teachers (and administrators) ostensibly opted for the more passive, lecture-worksheet approach to citizenship education over service-learning. It might be more accurate to state that service-learning did not survive the leap from theory into practice. As early as 1928 Rolla Tryon (1929, 1935) noted that POD texts were focused on external political issues and analyses, not on participatory problem solving of local/community issues. Although World War II activated children again to contribute directly to the war effort with community-based projects (Field 1994), the notion of wide-spread systematic service-learning disappeared from social studies curricula. The idea of service-learning was again seriously considered in the 1960s with a number of programs (Oliver & Shaver 1967; Newmann 1975; Hunt & Metcalf 1968), but again such programs were largely localized and teachers typically opted for more passive citizenship education (Shaver et al. 1991).

Although schools did not typically practice service-learning for citizenship, the idea of service-learning was very much alive in NCSS publications (Hepburn 1983; Parker & Jarolimek 1984; Robinson 1967; Rosenzweig 1982; West 1938), methods textbooks (Engle & Ochoa 1988; Hunt & Metcalf 1955/1968; Newmann & Oliver 1970; Saxe 1994; Wesley 1937), and other publications (American Association of School Administrators 1954; Bahmueller 1991; Merriam 1934; Ochoa & Manson 1969, 1972; Rugg 1931). In the elementary schools, the progressive character of the "expanding horizons," once the center piece of elementary social studies curricula, also included an emphasis on the inclusion of service-learning projects (Wesley & Adams 1946; Jenness 1991). Ultimately, while service-learning was explicitly called for by social studies theorists, it was (and still is) up to individual schools, administrators, and teachers to actively involve students in meeting community needs.

The question that emerges from this brief historical overview is why active service-learning did not take hold, or rather, why did most teachers and students appear to opt for other types of instruction? From an historical perspective, it is very clear that service-learning was promoted as an appropriate, if not desirable, pedagogical model for citizenship education. Why do most social studies teachers fail to explore service-learning and how can curricular leaders motivate teachers to use more service learning in their classes? Part of the answers to these questions rests on making a case for service-learning that teachers will find reasonable and more importantly practical. We now examine the empirical evidence on student outcomes in K-12 service-learning programs.

Empirical Evidence

Thus far, we have explored the potential of service-learning for revitalizing social studies education and civic apathy as well as the historical emphasis

on civic involvement. Both discussions provide a supportive backdrop to the question of whether or not service-learning is a viable approach to social studies education. Ultimately, this question is best answered through a critical examination of empirical evidence. If educators are to take the time and energy to include service-learning in their curricula, their efforts need to be substantiated by positive outcomes for their students. In this part of the paper, we discuss the existing research on K-12 student outcomes in community service and service-learning programs.

Selecting Studies

The choice of K-12 student outcomes as the focus in this review is informed by our belief that service-learning must be beneficial for K-12 students to be defensible in social studies K-12 and teacher education. Thus, studies exclusively focused on college age students were not included in this review; nor did we include studies focused solely on community outcomes or program quality. The procedures used to select the studies included the following: ERIC searches on community service and service-learning school-based programs, a search on the same topics conducted by the National Service-Learning Cooperative at the University of Minnesota, and a search through Dissertation Abstracts International for dissertations including community service or service-learning in the title. We also located other studies through reviewers' recommendations, personal contacts, and conference attendance. Studies of obviously poor quality, such as qualitative studies without systematic analysis or experiments that did not include pre and post-tests or a comparison group, were excluded from this review.

Limitations of Research on Service-Learning

Before examining the research on K-12 service-learning programs below, the limitations of research on service-learning in general should be considered. The limitations exist in three broad areas: (1) difficulties with assessing the effects of service-learning, (2) poorly designed research studies, and (3) inadequate reporting of research results, particularly in the context of literature reviews. While these problems overlap and influence each other, for the purpose of clarity each is discussed separately below.

The primary difficulty in assessing the effects of service-learning is that the term encompasses a wide variety of practices with an even wider variety of purposes (Conrad 1991; Hamilton 1981). Osipow (1979) further noted that "real effects of programs are obscured by the need to aggregate effects across individuals. Distinct changes in many different participants may cancel each other out when lumped together in a program evaluation" (p. 31). Related challenges include: different effects from different types of participation, difficulty in identifying the appropriate independent variables and appropriate research instruments and methods, outcomes focused on broad and stable personal characteristics that do not change quickly and are not measured easily using surveys or questionnaires, and the likely atypicality of participants in voluntary programs (Conrad 1991). In addition, researchers may choose to focus on specific outcomes or many outcomes that a program was not designed to achieve, and relatively brief duration of the service-learning program may make significant gains for students less likely than in longer programs, regardless of the objectives (Alt & Medrich 1994).

Hamilton and Fenzel (1988) noted additional difficulties related to the use of paper and pencil instruments, which often fail to confirm the positive judgments of both adult and student participants (Newmann & Rutter 1983). Students in voluntary programs may begin with very high scores on certain characteristics, such as social responsibility,[2] and thus there is the risk of a ceiling effect limiting the potential for significant impact. Also, standard methods of measuring effects may not accurately reflect the changes that occur in student behaviors and motivations (Alt & Medrich 1994).

All of these difficulties contribute to the challenge of designing quality studies to assess student outcomes in service-learning programs. Many of the studies that might have been included in a review such as this one were eliminated from consideration due to one or more of the following: failure to include a comparison or control group in an experimental study, failure to include pre-testing in an experimental study, no description of the community activity (we could not discern if there was any service involved), only anecdotal evidence reported, or no means for determining if the changes could be

attributed to the service component of the curriculum.

Often prior literature reviews can be helpful as a starting point in constructing a comprehensive, up-to-date review. While we located a few such reviews which did point us toward a number of research studies, the reviews themselves were generally not very helpful. Most were not critical in nature. Some reviewers tended to highlight only positive findings from studies with mixed findings or studies that suffer from one of the problems cited above. An examination of doctoral dissertations, in particular, often revealed more inconclusive findings than those cited by reviewers. Given the relatively recent emergence of service-learning programs, older reviews often included studies on college students or studies on other types of experiential learning programs such as internships or community-based education. The review in this article draws upon earlier works as well as recent doctoral dissertations and published research studies concerned with K-12 school-based community service and service-learning programs.

Potential Outcomes

As a final preface to a discussion of the research, it is important to consider the potential outcomes of service-learning. Service-learning advocates maintain that there are numerous benefits for students, schools,[3] and communities[4] through collaborating on service-learning projects. Student outcomes are generally presented in three major areas: social development, psychological development, and academic learning/intellectual development (Conrad 1991). Educators have asserted that service-learning may positively influence the following aspects of student development: academic skills, problem solving skills, critical thinking skills, ethical development, moral reasoning ability, social responsibility, self-esteem, assertiveness, empathy, psychological development, civic responsibility, political efficacy, tolerance and acceptance of diversity, specific skill acquisition relevant to the service tasks, and career goals and knowledge (Alt & Medrich 1994). Service-learning is often expected to have other positive effects as well, including fostering a decrease in behavior problems, increased enthusiasm for school, and students serving as positive role models for other students. A summary follows of the research on students in K-12 service-learning programs in four key outcome areas relevant to social studies education: (1) academic development, (2) social and personal development, (3) political efficacy and participation, and (4) future civic participation.

Academic Development

Research evidence for the impact of service-learning on academic development is neither extensive nor conclusive. Williams (1991) observed that few experiential education programs focus on improving academic achievement and Conrad (1991) noted that researchers studying experiential programs have tended to steer away from the acquisition of facts and concepts as a focus in inquiry.

A few studies, however, particularly those involving cross-age tutoring (one type of service-learning situated in the school), reveal some promising effects on academic development. Two meta-analyses of studies on tutoring revealed that students benefitted academically from having tutored, though the differences were not large (Cohen, Kulik, & Kulik 1982; Hedin 1987). Dewsbury-White (1993) found that service integrated with classroom learning led to greater subject matter achievement than service without an academic component.

Several recent studies have attempted to discern whether or not service experience increased grade point average. In a national study of Learn and Serve America middle and high school programs in four states, Melchior & Orr (1995) found no significant impacts on grade point average, school engagement, or perceived educational competence. Shumer (1994) found increases in grade point average among high school students in a community-based learning program but admitted that "we could not distinguish between purely service-related and career-related activities" (p. 367). The program also made use of college tutors who, according to the research on tutoring cited above, may have been instrumental in students' academic improvement.

Conrad and Hedin (1980, 1982) reported that students in a service program displayed better problem solving abilities than comparison students. The greatest increase in problem solving skills occurred when students experienced problems in their field

placements similar to the problems they were asked to solve on a skill test and when they actually participated in problem analysis activities in the field.

The issue of the match between tests and the service experience may also help to explain the lack of academic gains in most studies. "When the measuring test is a general test of knowledge there is usually no difference at all between students in service programs and those in conventional classrooms" (Conrad & Hedin 1989, p. 22). While general knowledge of students performing service does not usually differ from that of control students, it appears that service does not reduce knowledge, even though students are spending less time in the classroom (Alt & Medrich 1994; Waterman 1993).

Social and Personal Development

Proponents of service-learning argue that placing students in challenging situations where they will need to face real problems and consequences is an effective means of promoting personal growth. Conrad (1991) concluded that "the most consistent finding of studies of participatory programs is that these experiences do tend to increase self-esteem and promote personal development" (p. 543). Overall, the literature suggests that personal and social development are the best documented outcomes of secondary school sponsored community service programs (Conrad & Hedin 1989; Williams 1991). Alt and Medrich (1994) noted that while studies of voluntary service programs tend to show only small increases in self-confidence and improved self-image, "these data confirm a consensus of opinion expressed by teachers and students about positive gains in this area" (p. 9). Not every study has been positive (Kraft, Goldwasser, Swadener & Timmons 1993; Drug 1991; Malvin, Moskowitz, Schaps, & Schaeffer 1982) and neither tutors not tutees make statistically significant gains in self-esteem as a result of cross-age tutoring programs (Cohen, Kulik, & Kulik 1982). Yet numerous studies have noted gains in self-esteem, competence, or general self-worth (Conrad & Hedin 1982, 1989; Hamilton & Fenzel 1988; Hedin 1987; Newmann & Rutter 1983; Sager 1973; Waterman 1993; Yates 1995).

Conrad and Hedin (1981) found modest gains in social and personal responsibility as measured by the Social and Personal Responsibility Scale as did Crosman (1989) who compared her high school sample to Conrad and Hedin's. Newmann and Rutter (1983), using a modified version of the scale, also found modest gains. Their overall finding was that community service programs did have a positive impact on students' sense of social responsibility and sense of personal competence as contrasted with comparison groups. Hamilton and Fenzel (1988) found significant gains on the social responsibility subscale but not on the personal responsibility subscale; gains were greater for students involved in community service.

A few recent studies have found less consistent gains in personal and social responsibility. Melchior and Orr (1995) found statistically significant positive impacts for high school but not for middle school students in the areas of personal and social responsibility. Williams (1993) found significant gains in personal and social responsibility for students who participated in more than 10 hours of required service (but not for those who did only 10 hours). Ridgell (1994), in a study of 204 students from 9th grade civics classes that focused on service-learning in three Maryland public high schools, found no statistically significant differences in personal and social responsibility.

Political Efficacy

The findings on whether or not service-learning enhances political efficacy are mixed (Alt & Medrich 1994; Conrad & Hedin 1989; Furco 1994). A study of high school students did not credit participation in service with changes in political efficacy, plans for future participation, or future social/institutional affiliation (Newmann & Rutter 1983). Corbett (1977), in a study of a year-long community service program, also found no gains in political efficacy.

Three studies that do report positive effects on political efficacy are problematic for the reasons discussed below. Conrad and Hedin (1982) found that students in service-learning programs showed larger gains in valuing community involvement than control students, though no indication was given of the magnitude of these changes and whether differences were significant or not. Hamilton and Zeldin

(1987) found that students who participated in local government internships increased their knowledge of local government and their sense of competence in political work more than students in traditional classes focused on local government; however, the internship did not include service activities. Button (1972) found that students who did fieldwork regarding the political structure of their city gained in political efficacy and became more interested in politics. It is difficult, however, to attribute this finding to the fieldwork given that (a) there is very little information about the nature of the fieldwork in the dissertation, (b) Button indicates that not all students were able to follow through on this part of the curriculum, and (c) in-class activities may have also been influential as they focused extensively on the topics of government, political change, and racism.

A few other dissertations offer more promising findings. Using Campbell's Scale of Political Efficacy, Wilson (1974) found that students in a year-long community-based alternative school who engaged in political and social action gained in political efficacy. Following a year-long qualitative study of high school students' service-learning experience working at a soup kitchen, Yates and Youniss (in press) concluded that "service can stimulate reflection on society's political organization and moral order, as well as one's agency in relation to these domains" (p. 10). Marks (1994) gathered survey data from participants and non-participants in 60 independent high schools. While Marks did not incorporate a pre-post design in her survey study, she did institute various procedures to control for this omission. Marks legitimately concluded that "participation in community service proved to have a small, but statistically significant and positive effect on citizen efficacy" (1994, p. 169).

Future Civic Participation

Perhaps the most critical question in regard to service-learning is: Will service-learning experienced in K-12 schools lead to future adult civic participation? Some studies have shown little or no connection between service-learning experience and the intent to participate in one's community in the future (Newmann & Rutter 1983; Ridgell 1994) while others have revealed positive impacts for high school students in regard to the likelihood of future service (Melchior & Orr 1995; Yates 1995). While researchers are far from answering this question, a few additional studies provide food for thought on this issue.

Two studies by Independent Sector revealed that early community service experience is a strong predictor of volunteering for both teens and adults (Hodgkinson & Weitzman 1992a, 1992b). Furthermore, the role of schools is critical. Among teens who reported that their schools encouraged voluntary service, 75 percent volunteered. "Regardless of race or ethnic background, if individuals are asked to volunteer they are more than three times as likely to volunteer than if they are not asked" (Schervish, Hodgkinson, Gates, & Associates 1995). Another national survey of youth views further affirms the importance of the schools' role in encouraging community service-learning. Many teens indicated that they do not volunteer because they do not know how to get involved (74%) or simply are never asked (60%) (Wirthlin Group 1995). As in the Independent Sector studies, the Wirthlin Group (1995) found much higher involvement in youth community service when schools placed emphasis on its importance.

One group of researchers took an innovative approach to assessing the long range effects of community service programs. Beane, Turner, Jones, and Lipka (1981) attempted to compare the attitudes and experiences of students who participated in a Problems of Democracy course in the 1940's with same year graduates who did not participate in the program; the study was conducted 30 years later. While the authors admit to flaws in the research (most notably a low survey response rate of 27.5%), they did find support for their hypothesis that adults who participated in community service projects in high school demonstrate higher levels of community involvement than adults who did not engage in such projects in high school. A doctoral student working with Beane on a similar study, however, found mixed results when looking at gender differences and whether subjects stayed living in their original communities or not (O'Connell 1983).

Using a similar approach, researchers surveyed 628 students who graduated from high schools in

Cleveland, Los Angeles, Edmonton, and a St. Louis suburb in 1970 (Sturges, Barfoo, Friesen, Weaver, and Wood 1977). They found that highly politically active high school students who protested school and societal issues are more politically active adults as indicated by voting, supporting candidates, and supporting issues not unlike those they addressed in high school. (For an excellent review of similar studies on the relationship between social movement involvement and future civic participation, as well as a discussion of the common methodological flaws in such studies, see McAdam 1989).

Discussion of the Research Findings

What can one conclude from the findings presented here? To begin, we offer some general observations. First, there is inconsistency in virtually all outcome areas. This inconsistency can be explained in part by the quality of the service-learning program as measured by two factors: a reflection component and time spent on service. Researchers have found that the presence of a reflective seminar is a critical factor in predicting student outcomes (Conrad & Hedin 1980; Krug 1991; Newmann & Rutter 1983; Rutter & Newmann 1989). Some researchers also conclude that more time invested in service may lead to stronger gains for students (Hedin 1980; Kraft, Goldwasser, Swadener, & Timmons 1993; Marks 1994; Melchior & Orr 1995). Hamilton (1981) notes that "it would be unwise to attribute to all experiential learning programs results found in the very best" (p. 33). Indeed, it is interesting to note that many of the strongest findings cited in the review here come from studies focused on selected exemplary programs with both considerable time spent in service activities and strong reflective components (Conrad & Hedin 1980; Newmann & Rutter 1983). Differences in student characteristics may also account for some of the findings; for example, some studies have found greater gains for older students (Conrad 1982; Melchior & Orr 1995) and females (Patterson 1987; Hamilton & Fenze, 1988).

There are also observations that can be made in each of the outcome areas discussed. In regard to academic outcomes, there must be a good "fit" between the knowledge or problem solving skill gained through the service experience and the test used to assess knowledge gains. For example, Dewsbury-White (1993) compared two instructional models for service-learning, one which integrated service into a class and one that didn't. Students in the integrated model scored higher on a measure of subject matter achievement. It is no surprise that tutoring is the type of service-learning activity showing the strongest academic gains, given the similarity between tutoring tasks and general academic testing. We also note that while it is positive that service-learning involvement does not detract from academic achievement, this finding alone does not provide a strong justification for service-learning programs, given the time and effort they require over more traditional forms of teaching.

In the area of personal and social development, we note that even the best programs are likely to result in only modest (albeit valuable) gains. Still, significant effects on self-esteem and social responsibility are the strongest findings in this review. This is not particularly surprising, given the fact that the primary motivations for teachers and students to engage in service-learning are self-development and meaningful relationships (Boyte 1991; Newmann & Rutter 1983).

This last point also bears on the lackluster findings in the area of political efficacy. When programs promote an individualistic, charitable conception of service and do not tie their activities to political issues or organizations, participants are unlikely to gain on this dimension. Based on some of the findings cited in this review (Marks 1994; Wilson 1974; Yates & Youniss in press), it is reasonable to assume that certain types of programs (i.e., those focused on political issues, local government, and/or social action) are more likely than other types of programs to increase political efficacy.

The evidence indicates that it is possible, if not probable, that school-based service activities will lead to future adult civic involvement. In this regard, the role of the school in encouraging and providing opportunities for service is important and perhaps essential for heightening the quality of democratic public life.

While more research is imperative in all of the outcome areas discussed here, we believe that the empirical evidence supporting service-learning pro-

grams is strong enough to continue developing and evaluating such programs. Newmann (1975) noted that "if schools had to postpone curriculum development until conclusive research answered all important pedagogical questions, curriculum development would come to a halt and schools would wait indefinitely for research to justify proposed programs" (p. 109).

The research on service-learning is far from conclusive at this point, yet we believe that findings from studies of high quality programs (e.g., those with strong reflection components, considerable time spent in service, and focused program goals) are promising. We also concur with Conrad (1991) who asserted that despite the discrepancies or vague support for certain outcomes, there is one salient finding of almost every study of service-learning programs: "Participants, their teachers, their parents, and their community supervisors overwhelmingly agree that their programs were worthwhile, useful, enjoyable, and powerful learning experiences" (p. 545).

However, if social studies educators hope to attain more than anecdotal and inconsistent findings to support the practice of service-learning, they will first need to develop programs with focused, achievable objectives tied to the social studies curriculum, and second, conduct extensive research on the outcomes of such programs. The first of these tasks is made problematic by issues surrounding competing views of citizenship, the complexities of service and social action, and the role of politics in the curriculum. Following a discussion of these critical concerns, we conclude with recommendations for further research on service-learning outcomes.

Critical Issues

The multitude of potential outcomes discussed previously suggests that a critical issue for service-learning practitioners is to determine the desired results of the service-learning activities at the program planning stage. Kahne and Westheimer (1996) noted that various ideological, political, and social goals can be promoted by service-learning activities. For example, an intergenerational project at a nursing home might focus on students improving communication skills, developing empathy, analyzing policies affecting the elderly, conducting oral histories, or exploring careers related to aging. Newmann (1975) advocated that educators should first decide on objectives and second determine whether particular forms of community involvement might assist in their achievement. As the review of research here revealed, no service-learning program outcome is a guarantee; programs must be carefully structured to focus on desired effects.

Social studies educators, in particular, should be concerned with fostering political efficacy and future civic involvement and should structure service-learning experiences for their students accordingly. While the goals of academic, personal, and social development may also be important to social studies professionals, outcomes directly associated with active citizenship are uniquely aligned with social studies' mission. Newmann (1975), in his analysis of civic participation, asserted (and we concur) that involvement alone is not a defensible goal (e.g., some projects can be morally questionable), nor is an increased sense of efficacy (e.g., a high yet inaccurate sense of efficacy is not necessarily good). Thus, social studies educators must think carefully about their conceptions of citizenship and the types of community activities most likely to foster their ideals.

Kahne & Westheimer (1996) noted that there are two competing views of citizenship in the field of service-learning. The first emphasizes civic duty, volunteerism, and the value of altruism. The second view focuses on critical reflection about social policies and the acquisition of skills to exert influence in public affairs. While the first view is undoubtedly more prevalent and less controversial, a number of educators have stressed the importance of the second perspective (Barber 1992; Boyte 1991; Brandhorst 1990; Kahne & Westheimer 1996; Newmann 1975; Schneider 1995; Schultz 1991; Willison 1994). Newmann (1989) noted that a curriculum designed to prepare youth for one type of civic participation (i.e., community service) does not necessarily prepare them for others (i.e., voting, political campaigning, advocacy, etc.). Thus, educators working within the context of their schools and communities must decide on the specific emphases of their programs, perhaps facilitating a goals consensus process in the

community which includes service-learning as part of the package.

The complexities within the concepts of service as altruistic duty and service as social action are heightened when one realizes that these terms defy simple definitions. Although some educators may tend to see "service" as a more conservative pursuit than "social action," indeed either can have conservative or liberal goals. Social action often incorporates a service element when it is aimed at meeting a real need as well as changing institutions or public policies. And, while some service projects focus solely on addressing a local environmental or social need, others involve students in critiquing current policies and advocating for changes in laws or institutional procedures. While both service and social action can therefore be compatible, educators may at times experience tension in trying to decide how to approach a project focused on community change. Following a brief critique of current service-learning practice, we present a further explication of this second, less prevalent "social action" perspective for educators' consideration in defining their service-learning program goals.

Boyte (1991) is critical of the current conception of service as it focuses exclusively on personal relevance and social membership. Brandhorst (1990) noted that while there is evidence that young people are drawn to community service activities that involve caring about others and "feeling good" about oneself as a result, there appears to be little interest in public citizenship.

> Service does little to connect students' everyday concerns with the political process. Nor do service projects normally teach the political skills that are needed to work effectively toward solving society's problems: public judgment, the collaborative exercise of power, conflict resolution, negotiation, bargaining, and holding oneself and others accountable (Boyte 1991, p. 766).

Boyte further noted that most service-learning programs include little learning about the policy issues that students address in their personal efforts. Participants rarely engage in reflection on the complex dynamics of power, race, and class.

Willison (1994) confirmed Boyte's position in his observations of students working in community feeding programs (soup kitchens, free lunch programs, food pantries, and the like). To counteract stereotyping and misinformation, Willison advocated in-class activities focused on examining poverty in a historical and contemporary context. Learning about health care, child care, and other job-related and living expenses, as well as other economic and social factors that influence poverty and homelessness, are important aspects of in-class education.

Schultz (1991) also pointed out the importance of examining the context in which the need for service exists. He noted that it is possible to become so intent on the problems at hand that students "lose awareness of the larger historical and contemporary forces acting on the present situation. This can lead to inappropriate action and an inability on the part of the student to generalize from present to subsequent action" (p. 59). In too many service-learning programs, students simply accept societal situations they confront "as they are" without questioning what might be needed for broad-based social change or developing an imaginative vision of how we could all live together in more just and humane ways (Schultz 1991).

Educators with a social action perspective on service-learning agree that the combination of service work and critical reflection is vital to promote interest in and insight into complex social issues. Teachers must structure the analytic process carefully so that students will challenge their predispositions and self-interests and yet still be allowed to formulate their own views on public issues. "Citizenship in a democratic community requires more than kindness and decency; it requires engagement in complex social and institutional endeavors. Acts of civic duty cannot replace government programs or forms of collective social action. Citizenship requires that individuals work to create, evaluate, criticize, and change public institutions and programs" (Kahne & Westheimer 1996, p. 597).

In summary, according to the social action perspective, social studies educators should frame service-learning within the context of civic action and public virtue. Students should be encouraged to look

beyond their own individual interests and find themselves in the larger interests of the community. Social studies teachers should incorporate the study of historical and societal issues in the service-learning project. Students will need to be challenged to question the status quo, to examine stereotypes, to look beneath appearances in identifying causes, to seek out diverse opinions from varying information sources, and to be bold enough to envision more just and equitable ways of structuring our democratic society. Furthermore, if political efficacy is an important program objective, students will likely be more successful if they engage in service activities dealing with government or political issues.

While it is easy to write about the importance of social action, oftentimes political issues can be controversial in the social studies curriculum. This may be one likely reason why so few service-learning programs address the political, social, and economic dimensions of society that create the need for community service. Indeed, the Corporation for National service (1995) lists some types of political action as "prohibited activities" in their grant guidelines. Program leaders need to be aware of parent or community opposition to some types of social and political action as well.

The complexities within service and social action provide challenges for social studies educators to deal with when designing defensible service-learning programs. Other issues within the practice of service-learning (e.g., curriculum integration, meaningful reflection, time for service) and the logistics of public schooling in the U.S. (e.g., individualistic values, 50 minute subject periods, textbook orientation) must also be addressed. The practice of service-learning will always remain problematic to some degree, given the structural and cultural obstacles of schooling which remain to be overcome. Particular challenges exist within varied settings as well: urban, rural, multicultural, teacher education, etc. There is also the issue of how participants' attitudes (e.g., condescending, prejudiced) can confound the effectiveness of service and the question of how much change can actually be accomplished through service-learning. All of these issues are likely to contribute to service-learning being less popular in the social studies than one would hope. These issues have been explored elsewhere (Wade 1995b; Wade & Anderson 1996; Wade & Eland 1995) and their relevance to the social studies will be the subject of a future publication (Wade in press). We conclude here with recommendations for further research which will enrich our understanding of the practice of service-learning in the social studies.

Recommendations for Further Research

Research on many aspects of service-learning programs is greatly needed. In regard to student outcomes in the social studies, research on quality programs aimed at specific social studies goals and objectives would enhance our knowledge of effective practice. Researchers should choose programs for study that do all of the following: (a) specify objectives based on meaningful service and student learning, (b) match objectives to service and learning activities, and (c) include considerable time to be spent on reflection and service. Methods and tools for studying such programs should also be carefully matched with program objectives and activities. In particular, studies focused on assessing political efficacy and the long range effects of service-learning programs on adult civic involvement would help social studies educators assess the viability of service-learning for their curricula.

Hamilton (1980) maintained that there are four questions which must be addressed to assess the effectiveness of any experiential education program. First, do participants say they have been affected? Second, is there external evidence of the effects? Third, is there evidence that the program is responsible for the effects? And fourth, what is it about the program that was responsible for the effects? While question one has been answered in the affirmative in regard to service-learning, the other three questions cannot be answered conclusively at this point. "Simply measuring some sort of change among program participants provides an inadequate basis for inferring that the change resulted from participation in the program. It is also necessary to compare program participants with nonparticipants using the measures" (Hamilton, 1980, p. 197). The fourth question is undoubtedly the most difficult to answer. While we currently have some strong indications of program characteristics that make a difference (e.g., reflection, time), there have to date been very few

studies comparing programs that are different in some dimensions and similar in others.

While these types of experimental designs are needed, researchers should not overlook the benefits of well-designed qualitative studies. Yates (1995) notes that most studies provide little insight about the processes through which service is made meaningful and relevant to youth. Yates' and Youniss' (1996) qualitative study analyzing high school students' reflective essays and comparing their ideas to Luckmann's (1991) "transcendent narratives" is one example of an approach that led to relevant findings about the process of service-learning.

Conclusion

We began this paper with a question: Is the inclusion of service-learning in the social studies curriculum likely to contribute to students' future involvement in the social and political life of the community? We believe that this outcome is possible, perhaps even probable, but *only* if service-learning programs are carefully planned around social studies objectives and implemented effectively in the school and community. Attention must be paid to both how teachers can be supported in their service-learning efforts and how service-learning fits within the existing school culture and community. Further, social studies educators must not neglect the thorny issues that can lead service-learning activities to result in "feel good" exercises rather than the means for learning about and embracing the notion of public virtue. Each social studies educator involved in community activities needs to reflect on the complexities of service and social action, and decide if she or he wants to encourage students to question the status quo, meet a community need, and/or study the contextual factors underlying social issues.

While there is considerable work ahead to effectively infuse service-learning in the social studies and to assess the effects of such activities through quality research studies, these efforts are well-justified. Community participation in a democratic society should not be simply an option; it is both a right and a responsibility. It is the schools' obligation and social studies' mission to develop students who have the skills, knowledge and attitudes to participate as informed, active, and ethical members of their communities and this democracy.

Notes

1. See, for example, educational reports calling for youth service initiatives (Carnegie Council on Adolescent Development 1989; Sarason 1991; William T. Grant Foundation 1991). Millions of federal dollars have supported service-learning activities in 48 states since the establishment of the Commission on National and Community Service in 1990. Service-learning has also been promoted by numerous private foundations and the endorsements of such educational organizations as the Association for Supervision and Curriculum Development and the National Association of Secondary School Principals.

2. Hedin and Conrad (1980) found that students in service-learning programs had the highest pre-test scores on the Personal and Social Responsibility Scale as compared to students in other experiential education programs.

3. For the school, the potential outcomes of service-learning include improvements in teacher-student relationships and teachers' collegial relationships as well as improved school climate (Brill 1994; Shumer 1994). A third potential outcome for schools is the positive relationship formed with the community.

4. Communities also benefit from students' contributions through service-learning programs. People in need, such as the elderly or individuals with low income, receive direct aid. The environment is enhanced as well when parks are cleaned, trees are planted, river water quality is tested. Agencies benefit from the new ideas, enthusiasm, and extra help offered by student volunteers.

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